

# Peak Performance

Kenwood Introduces the Rugged 2-Meter HT

## TH-K2AT



# KENWOOD

COMMUNICATIONS

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AMATEUR ELECTRONIC SUPPLY

## HAM RADIO CATALOG

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# Icom Mobiles and HTs...



## IC-208H *Dual Band with Attitude!*

Think of it as the '2720H's kid brother - with attitude

- 2M/70CM • 55W VHF/50W UHF • 500 Alphanumeric Memories • CTCSS/DTCS Encode/Decode w/ Tone Scan • Wide Band RX\*\* 118-999.990 MHz • Remote Control Mic • DMS • DTMF Encode • 10dB Attenuator



## ID-1 *Fast Digital Now!*

Amateur radio will never be the same

- 1.2GHz • 10W/1W Selectable • 105 Alphanumeric Memories • CTCSS Encode/Decode w/Tone Scan • FM (Analog Voice)/GMSK (Digital Voice/Data) • 128K Data • USB Control Interface • 10 BASE-T Ethernet Port • AMBE 2.4kbps • PC Control



## IC-703 *Ultimate QRP!*

The legacy of the 706MKIIG...now in QRP configuration

- HF/6M • 10W-0.1W@13.5V SSB, CW, RTTY, FM / 4W - 0.1W @ 13.5V AM • Newly Designed PA Unit • Internal Antenna Tuner • Detachable, Removable Control Panel • DSP with Auto Notch Filter & Noise Reduction • Automatic Battery Save Mode • Automatic Power Scale Meter • Low Current Mode • High Sensitivity



## IC-706MKIIG *Ultimate Mobile!*

Built-in DSP and 100W of output power, yet no bigger than most mobiles

- 160-10M\*/6M/2M/70CM • HF/6M @ 100W, 2M @ 50W, 70CM @ 20W • 107 Alphanumeric Memories • CTCSS Encode/Decode w/Tone Scan • AM, FM, WFM, SSB, CW, RTTY; w/DSP • Auto Repeater • Plug-n-Play Filters • Backlit Function Keys • Built-in Keyer • IF-Shift • Tone Squelch • Remote Head Operation with Optional Equipment



## IC-2720H

### *V/V, U/U, V/U Operation!*

Large display and simple, independent controls on each band make for true dual band fun

- 2M/70CM • 50W VHF/35W UHF Output • 212 Memories • CTCSS & DTCS Encode/Decode w/Tone Scan • DMS • Remote Control Mic • Wide Band RX\*\* 118-549, 810-999 MHz • Auto Repeater



## IC-V8000

### *High Power 2M!*

75W output for power when you need it  
Let your signal be heard

- 2M • 75W Output • 207 Alphanumeric Memories • CTCSS & DTCS Encode/Decode w/Tone Scan • DMS • Remote Control Mic • FM Narrow Mode • Weather Alert & Channel Scan



## IC-2100H 25N

### *Great 2M On a Budget!*

Commercial grade rugged and simple to use  
With superior receive IMD and performance

- 2M • 50W Output • 113 Alphanumeric Memories • CTCSS Encode/Decode w/Tone Scan • Remote Control Mic • MIL STD • Auto Repeater • Large Keys and Knobs



# ...Fun to GO!

## IC-V8

### **Rugged, Easy to Use!**

Reversible UP/DOWN buttons and rotary selector

- 2M @ 5.5W
- Excellent Audio
- 100 Alphanumeric Memories
- CTCSS & DTCSS Encode/Decode w/Tone Scan
- Auto Repeater Function
- PC Programmable<sup>1</sup>

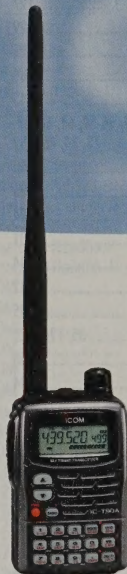


## IC-T90A

### **Mini Multiband Marvel!**

Ultra compact with morse code synthesizer

- 6M/2M/70CM @ 5.5W
- Wide Band RX<sup>\*\*</sup> .495 - 999.99MHz
- 500 Alphanumeric Memories
- CTCSS & DTCSS Encode/Decode w/Tone Scan
- Weather Alert
- PC Programmable<sup>1</sup>



## IC-W32A

### **True Dual Band Performance!**

Independent band controls with VHF/UHF exchange function

- 2M/70CM @ 5W
- 200 Alphanumeric Memories
- V/V, U/U, V/U Operation
- True Simultaneous Receive
- DTMF Auto Dialer w/Memory
- Auto Repeater Function
- PC Programmable<sup>1</sup>



## IC-T2H SPORT

### **Great 2M On a Budget!**

Easy operation - uses AA alkalines. Customizable keys

- 2M @ 6W
- 40 Alphanumeric Memories
- Alkaline Case
- CTCSS Encode/Decode w/Tone Scan
- Auto Repeater Function
- PC Programmable<sup>1</sup>

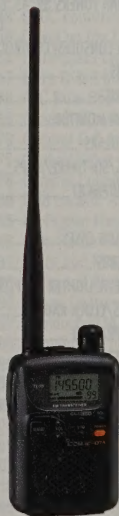


## IC-Q7A

### **Small Size, Big Sound!**

Ultra compact with wide band receive - 30 to 1300MHz<sup>\*\*</sup>

- 2M/70CM @350mW/300mW
- Wide Band RX<sup>\*\*</sup> 30-1300 MHz
- 200 Memory Channels
- Auto Squelch
- CTCSS Encode/Decode
- Economical Design



## IC-T22A

### **High End 2M!**

5 transmit and 5 receive alphanumeric message memories

- 2M @ 5W
- RX 118-174 MHz Inc. Air Band RX
- 40 Alphanumeric Memories
- Auto Low Power & Power Saver
- Auto Repeater Function
- PC Programmable<sup>1</sup>



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**ICOM**

<sup>1</sup>Except 60M band. <sup>\*\*</sup>Cellular frequencies blocked on USA versions. <sup>\*</sup>Optional software and cable required  
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Note: Charges for truck shipments from 1-99 lbs are running a minimum of \$80.00, plus local destination charges. It is advisable to contact a local freight office for a quotation.

(D) **DISCONTINUED** by Manufacturer but available from stock in limited quantities when price guide was published.

(†) **TEMPORARY LOW PRICE** due to special purchase, over stock, etc. Quantities may be limited at this price.

(Δ) Item not discontinued by Manufacturer but probably won't be available from AES when present stock is gone.

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## ADI (ADI)

## AES Price

<b>AT-201HP</b> 5w 2m FM HT/batt/cgr/TTP .....	\$ 99.99
<b>AT-401HP</b> 5w 440 FM HT/batt/cgr/TTP .....	159.99
<b>CBP-262</b> Battery holder; 6 AA nicads .....	19.99
<b>CHA-072</b> Wall charger for RBP-072 batt ...	10.99
<b>CHA-120</b> Wall charger for RBP-120 batt ...	10.99
<b>CHA-612</b> Wall charger for RBP-612 batt .D	2.99
<b>CHA-672/CHA-607</b> Wall cgr; RBP-607 batt D	1.99
<b>PCA-145</b> Cig lighter cable; not for AT-600 ..	14.99
<b>RBP-120</b> 12v 700mah NiMH .....	49.99
<b>SD-911</b> Rapid charger .....	62.99
<b>SLC-200/SLC200S</b> 2.5w case; not AT-600 D	2.99
<b>SLC-200-L</b> 1.5w carrying case; not for AT-600 Δ	14.99
<b>SLC-600-S</b> 2.5w carrying case; AT-600 ...D	2.99
<b>SLC-600-L</b> 5w carrying case; AT-600HP .D	9.99

See Premier for speaker/mics for ADI HTs

<b>AR-147+</b> 60w 2m FM Xcwr w/TTP mic .....	149.99
<b>MTG BKT</b> Extra mobile bracket .....	10.99
<b>PROG-47</b> PC prog soft/cable; AR-147/247/447	39.99
<b>PWR CORD</b> Extra DC cable .....	10.99
<b>AR-247</b> 30w 220 FM Xcwr w/TTP mic .....	209.99
<b>MTG BKT</b> Extra mobile bracket .....	10.99
<b>PROG-47</b> PC prog soft/cable; AR-147/247/447	39.99
<b>PWR CORD</b> Extra DC cable .....	10.99
<b>AR-447</b> 35w 440 FM Xcwr w/TTP mic .....	209.99
<b>MTG BKT</b> Extra mobile bracket .....	10.99
<b>PROG-47</b> PC prog soft/cable; AR-147/247/447	39.99
<b>PWR CORD</b> Extra DC cable .....	10.99

## ADI/PRYME

<b>PR-52</b> 5w 6m FM HT/batt/cgr/TTP .....	D \$159.99
<b>PR-222</b> 5w 220 FM HT/batt/cgr/TTP .....	D 169.99
<b>CBP-263</b> AA battery case .....	Δ 14.99
<b>CHA-120</b> Wall charger for RBP-22 batt ...	10.99
<b>PTC-001</b> Mobile power pack .....	Δ 19.99
<b>RBP-22H</b> 12v 1000mah NiMH battery .....	Δ 49.99
<b>SD-911</b> Rapid charger .....	62.99
<b>SLC-22L</b> Leather case .....	D 9.99

See Premier for speaker/mics for ADI/Pryme HTs

## AES (AES)

<b>Black On Air</b> Black ON AIR illuminated sign ..	\$ 69.99
<b>Oak On Air</b> Oak ON AIR illuminated sign .....	69.99
<b>PCL-1</b> 20w mobile spkr w/3.5mm plug .....	19.99

## AES Price

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<b>24-7739P</b> Coax stripper; RG-8/11/213 .....	28.99
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<b>38-312</b> 1.2A 1.5/3/4.5/6/7 5/9/12vdc adapt	29.99
<b>38-384</b> 4A power supply, 5A surge .....	39.99

## AOR (AOR)

<b>AR-3000AB</b> 1-2036MHz dtx w/SSB/cell blkd	1099.99
<b>MM-1</b> Mobile mounting bkt; AR-3000AB D	9.99
<b>SDU-5500</b> Spectrum display unit .....	1099.99
<b>AR-8600 Mk II-B</b> .53M-2.04G base Rcvr/cell blkd	899.99
<b>SDU-5500</b> Spectrum display unit .....	1099.99
<b>AR-8200 Mk III-B</b> .5M-3G hand/SSB/cell blkd	569.99
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<b>350M</b> .54-1.6MHz antenna element .....	76.99
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<b>TDF-370</b> Multi-media terminal/DSP .....	329.99

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<b>195</b> Introduction to Morse Code cassettes .....	14.95
<b>198</b> Introduction to RF Design w/software .....	39.95
<b>200</b> Low Power Communication .....	14.95
<b>201</b> Log Book .....	5.00
<b>202</b> Map of North America .....	15.00
<b>205</b> Minilog .....	4.95
<b>208</b> More Wire Antenna Classics .....	14.00
<b>210</b> Morse Code the Essential Language .....	8.00
<b>236</b> Now You're Talking (new ham) .....	19.95
<b>240</b> On the Air With Ham Radio .....	17.95
<b>241</b> Operating Manual .....	25.00

## ARRL - continued

## AES Price

<b>242</b> Operating Manual CD-ROM .....	39.95
<b>244</b> 2003 Passport to Worldband Radio ....D	19.95
<b>245</b> 2004 Passport to Worldband Radio .....	22.95
<b>254</b> 1995 ARRL Periodicals CD-ROM .....	19.95
<b>256</b> QRP Power .....	12.00
<b>257</b> 1996 ARRL Periodicals CD-ROM .....	19.95
<b>258</b> RF Exposure and You .....	19.95
<b>259</b> 1997 ARRL Periodicals CD-ROM .....	19.95
<b>260</b> Radio Puzzler .....	7.95
<b>261</b> Radio Frequency Interference .....	20.00
<b>263</b> 1998 ARRL Periodicals CD-ROM .....	19.95
<b>266</b> 1999 ARRL Periodicals CD-ROM .....	19.95
<b>267</b> 2000 ARRL Periodicals CD-ROM .....	19.95
<b>268</b> 2001 ARRL Periodicals CD-ROM .....	19.95
<b>269</b> 2002 ARRL Periodicals CD-ROM .....	19.95
<b>272</b> 2003/2004 Repeater Directory .....	9.95
<b>277</b> Satellite Anthology 5th edition .....	15.00
<b>280</b> Satellite Handbook .....	24.95
<b>301</b> 10-15 wpm code practice audio CD .....	14.00
<b>304</b> Simple and Fun Antennas for Hams .....	22.95
<b>308</b> Spread Spectrum Source Book .....	20.00
<b>310</b> Stealth Amateur Radio .....	14.95
<b>316</b> Tech Q & A Manual .....	12.95
<b>320</b> Transmitter Hunting .....	24.95
<b>323</b> TravelPlus for Repeaters 03/04 CD-ROM	39.95
<b>328</b> Understanding Basic Electronics .....	20.00
<b>329</b> Vertical Antenna Classics .....	12.00
<b>330</b> VHF/UHF Antenna Classics .....	14.95
<b>340</b> W1FB's QRP Notebook .....	10.00
<b>342</b> Weather Satellite Handbook .....	20.00
<b>344</b> Wire Antenna Classics .....	14.00
<b>346</b> World Azimuthal Map .....	15.00
<b>347</b> Radio Amateurs World Atlas .....	9.95
<b>348</b> World Robinson Map .....	15.00
<b>350</b> Yagi Antenna Classics .....	17.95
<b>354</b> Your Mobile Companion .....	12.00

## ATOC IRON HORSE (ATO)

<b>AN-38</b> NMO to 3/8-24 thread adapter .....	\$ 13.99
<b>ATA-144</b> 2m 2.5db glass mounted 27.5" ant	23.99
<b>ATA-270</b> 2m/440 2.6/4db glass mt 26" ant ..	29.99
<b>IH-4501</b> 4 x 5" 3/8-24 quad magnet mt .....	52.99
<b>IH-4501-SO</b> 4 x 5" SO-239 mt quad magnet mt	57.99
<b>IHF-5S</b> Set of 5 HF mob ants (10/15/20/40/75)	89.99
<b>IHF-6</b> 6m 7" mobile antenna .....	19.99
<b>IHF-10</b> 10m 7" mobile antenna .....	19.99
<b>IHF-12</b> 12m 7" mobile antenna .....	19.99
<b>IHF-15</b> 15m 7" mobile antenna .....	19.99
<b>IHF-17</b> 17m 7" mobile antenna .....	19.99
<b>IHF-20</b> 20m 7" mobile antenna .....	19.99
<b>IHF-30</b> 30m 7" mobile antenna .....	19.99
<b>IHF-40</b> 40m 7" mobile antenna .....	22.99
<b>IHF-75</b> 75m 7" mobile antenna .....	26.99
<b>IHKD-3S</b> Set of 5 quick disconnects .....	21.99
<b>IHF-5MS</b> Set of 5 HF mini mob (10/15/20/40/75)	89.99
<b>IHF-6</b> 6m 42" mini mobile antenna .....	19.99
<b>IHF-10</b> 10m 36" mini mobile antenna .....	19.99
<b>IHF-12</b> 12m 36" mini mobile antenna .....	19.99
<b>IHF-15</b> 15m 39" mini mobile antenna .....	19.99
<b>IHF-17</b> 17m 39" mini mobile antenna .....	19.99
<b>IHF-20</b> 20m 41" mini mobile antenna .....	19.99
<b>IHF-30</b> 30m 40" mini mobile antenna .....	19.99
<b>IHF-40</b> 40m 44" mini mobile antenna .....	22.99
<b>IHF-75</b> 75m 76" mini mobile antenna .....	26.99
<b>IHF-80</b> 80m 76" mini mobile antenna .....	27.99
<b>IHMM-144</b> 2m 25w ¼ wave mag mt ant/BNC	17.99
<b>IHMM-220</b> 220 25w ¼ wave mag mt ant/BNC	17.99
<b>IHMM-270</b> 2m/440 25w ¼ wave mag mt ant/BNC	17.99
<b>IHMM-440</b> 440 25w ¼ wave mag mt ant/BNC	17.99
<b>IHSB-2</b> Flat stake bed mt w/SO-239 & ¼-24	23.99
<b>IHSB-4</b> Triangular stake bed mt w/SO-239 & ¼-24	29.99
<b>IHTH-1</b> ¼-24 trailer hitch antenna mount .....	17.99



## AES Price

### Alan Broadband (ALA)

Zap Checker Radio transmitter/bug detector \$ 89.99

## ALINCO (ALI)

<b>DJ-C5T</b>	300mw cc size 2m/440 HT/lith ion/spkr	\$149.99
<b>EDC-16B</b>	Cigarette lighter cable w/filter	21.99
<b>EDC-36</b>	Angle plug power cable w/filter	24.99
<b>EME-17</b>	Boom earphone mic	32.99
<b>EME-18</b>	Earphone	8.99
<b>EDS-7</b>	Mic adapter; EME-17/18	12.99
<b>EME-20</b>	Tie-pin mic & earphone	17.99
<b>EMS-49</b>	Miniature lapel spkr/mic	32.99
<b>EMS-50</b>	Speaker/mic	41.99
<b>ESC-34</b>	Soft case for w/belt clip	13.99
<b>EB-3</b>	3 Belt clip; DJ180HT/280TH	.99
<b>EDC-45</b>	Desk quick charger; 180TH/280TH D	49.99
<b>EDC-49</b>	Batt cgr; EBP-20/22/24/26/28N	19.99
<b>EDC-55</b>	Drop-in cgr; EBP30/31/32N; GIT	.99
<b>EDH-12</b>	DC jack adapter; DJ-180/280TH	9.99
<b>EME-11</b>	Ear/mic w/PTT/VOX; DJ-180/280TH D	14.99
<b>ESC-18</b>	Soft case; 180TH/EBP-26N	2.99
<b>ESC-19</b>	Soft case; 180TH/EBP-28N	9.99
<b>DJ-196T</b>	5w 2m FM HT/batt/cgr/TTP	139.99
<b>DJ-296T</b>	5w 220 FM HT/batt/cgr/TTP	179.99
<b>DJ-496T</b>	5w 440 FM HT/batt/cgr/TTP	149.99
<b>DJ-596T</b>	5w 2m/440 FM HT/NIMH/cgr/TTP D	209.99
<b>DJ-596T MK II</b>	5w 2m/440 HT/NIMH/cgr/TTP	209.99
<b>EB-6</b>	Mobile bracket	15.99
<b>EBP-48N</b>	9.6v 700mah 5w nicad battery	64.99
<b>EBP-50N</b>	9.6v 700mah 5w NiMH battery	23.99
<b>EBP-51N</b>	9.6v 1500mah 5w NiMH battery	37.99
<b>EBP-56N</b>	7.4v 1000mah lithium ion battery	49.99
<b>EDC-111</b>	Charger for EBP-56N	45.99
<b>EDC-16B</b>	Cigarette lighter cable w/filter	21.99
<b>EDC-36</b>	Angle plug power cable w/filter	24.99
<b>EDC-37</b>	13.8v power cable	7.99
<b>EDC-43</b>	Cig lighter cable	10.99
<b>EDC-88</b>	Quick charger; nicad battery packs	60.99
<b>EDC-97</b>	Quick charger; NiMH battery packs	70.99
<b>EDH-30</b>	Dry cell battery case	15.99
<b>EJ-47U</b>	Digital board for DJ-596T only	109.99
<b>EJ-47U</b>	Digital board; Mk II versions	179.99
<b>EME-6</b>	Earphone	10.99
<b>EME-12</b>	Headset w/earphone/mic/VOX	71.99
<b>EME-13</b>	Headset w/ear bud/mic/VOX	71.99
<b>EME-15</b>	Earphone/mic w/VOX	56.99
<b>EME-17</b>	Boom earphone mic	32.99
<b>EME-20</b>	Tie-pin mic & earphone	17.99
<b>EMS-47</b>	Spkr/mic w/volume control	24.99
<b>ERW-4C</b>	PC cable	39.99
<b>ESC-36</b>	Soft case for EBP-48N	13.99
<b>SW-596</b>	Windows prog software; DJ-596T	29.99
<b>DJ-V5TH</b>	5w 2m/440 FM HT/batt/cgr/TTP	209.99
<b>EBP-46N</b>	9.6v 600mah 5w nicad battery	64.99
<b>EDC-16B</b>	Cigarette lighter cable w/filter	21.99
<b>EDC-36</b>	Angle plug power cable w/filter	24.99
<b>EDC-37</b>	13.8v power cable	7.99
<b>EDC-43</b>	Cig lighter cable	10.99
<b>EDC-91</b>	Quick charger	60.99
<b>EDH-29</b>	Dry cell case for 4-AA's	12.99
<b>EME-6</b>	Earphone	10.99
<b>EME-12</b>	Headset w/earphone/mic/VOX	71.99
<b>EME-13</b>	Headset w/ear bud/mic/VOX	71.99
<b>EME-15</b>	Earphone/mic w/VOX	56.99
<b>EME-17</b>	Boom earphone mic	32.99
<b>EME-20</b>	Tie-pin mic & earphone	17.99
<b>EMS-82</b>	Remote speaker/mic	50.99
<b>EMS-47</b>	Spkr/mic w/volume control	24.99
<b>ESC-35</b>	Soft case for EBP-45N/46N	13.99
<b>DJ-S11T</b>	340mw 2m FM HT/battery holder	79.99
<b>EB-6</b>	Mobile bracket	15.99

## Alinco - continued

<b>EDC-78</b>	Wall charger; (not for alkalines)	7.99
<b>EDH-18</b>	12v to 5.5v DC/DC conv/cig plug	32.99
<b>EME-6</b>	Earphone	10.99
<b>EME-12</b>	Headset w/earphone/mic/VOX	71.99
<b>EME-13</b>	Headset w/ear bud/mic/VOX	71.99
<b>EME-15</b>	Earphone/mic w/VOX	56.99
<b>EME-17</b>	Boom earphone mic	32.99
<b>EME-20</b>	Tie-pin mic & earphone	17.99
<b>EMS-47</b>	Spkr/mic w/volume control	24.99
<b>ESC-27</b>	Soft case	16.99
<b>DJ-S40T</b>	500mw 440 FM HT/battery holder	89.99
<b>EB-6</b>	Mobile bracket	15.99
<b>EBP-52N</b>	3.6v 500mah NiMH battery	37.99
<b>EBP-53N</b>	6v 500mah NiMH battery	45.99
<b>EBP-54N</b>	3.6v 1500mah NiMH battery	49.99
<b>EDC-37</b>	13.8v power cable	7.99
<b>EDC-43</b>	Cig lighter cable	10.99
<b>EDC-105</b>	Drop-in NiMH battery cgr, less ps	24.99
<b>EDC-93</b>	Wall ps for EDC-105	10.99
<b>EDH-31</b>	Dry cell battery case	12.99
<b>EME-6</b>	Earphone	10.99
<b>EME-12</b>	Headset w/earphone/mic/VOX	71.99
<b>EME-13</b>	Headset w/ear bud/mic/VOX	71.99
<b>EME-15</b>	Earphone/mic w/VOX	56.99
<b>EME-17</b>	Boom earphone mic	32.99
<b>EME-20</b>	Tie-pin mic & earphone	17.99
<b>EMS-82</b>	Remote speaker/mic	50.99
<b>EMS-47</b>	Spkr/mic w/volume control	24.99
<b>ERW-4C</b>	PC cable	39.99
<b>ESC-37</b>	Soft case	13.99
<b>DJ-X2T</b>	522KHz-1GHz cc size Rcv/lith ion/cell bldk D	199.99
<b>EDC-36</b>	Angle plug power cable w/filter	24.99
<b>EDC-37</b>	13.8v power cable	7.99
<b>EDC-43</b>	Cig lighter cable	10.99
<b>EDH-27</b>	Dry cell case w/charger	38.99
<b>EDH-28</b>	DC/DC converter w/cig plug	35.99
<b>ESC-34</b>	Soft case w/belt clip	13.99
<b>DJ-X3T</b>	1MHz-1.3GHz AM/FM hand Rcv/cell bldk	209.99
<b>EBP-52S</b>	3.6v 500mah NiMH battery	37.99
<b>EDC-105</b>	Drop-in NiMH battery cgr, less ps	24.99
<b>EDC-93</b>	Wall ps for EDC-105	10.99
<b>EDH-31S</b>	Dry cell battery case	12.99
<b>ESC-37</b>	Soft case	13.99
<b>DJ-X10T</b>	1MHz-20Hz AM/FM/SB hand Rcv/cell bldk	309.99
<b>EBP-33N</b>	4.8v 650mah nicad battery	24.99
<b>EBP-34N</b>	4.8v 1200mah nicad battery	84.99
<b>EBP-37N</b>	4.8v 700mah nicad battery	34.99
<b>EDC-16B</b>	Cigarette lighter cable w/filter	21.99
<b>EDC-36</b>	Angle plug power cable w/filter	24.99
<b>EDC-37</b>	13.8v power cable	7.99
<b>EDC-43</b>	Cig lighter cable	10.99
<b>EDC-88</b>	Quick charger; nicad battery packs	60.99
<b>EDH-16</b>	Dry cell battery case	12.99
<b>EME-6</b>	Earphone	10.99
<b>ERW-4C</b>	PC cable	39.99
<b>ESC-28</b>	Soft case for EBP-33N	13.99
<b>ESC-29</b>	Soft case for EBP-37N	13.99
<b>ESC-30</b>	Soft case for EBP-34N	13.99
<b>DJ-X2000T</b>	1-2149MHz receiver/cell blocked	499.99
<b>EBP-33N</b>	4.8v 650mah nicad battery	24.99
<b>EBP-34N</b>	4.8v 1200mah nicad battery	84.99
<b>EBP-37N</b>	4.8v 700mah nicad battery	34.99
<b>EDC-16B</b>	Cigarette lighter cable w/filter	21.99
<b>EDC-36</b>	Angle plug power cable w/filter	24.99
<b>EDC-37</b>	13.8v power cable	7.99
<b>EDC-43</b>	Cig lighter cable	10.99
<b>EDC-88</b>	Quick charger; nicad battery packs	60.99
<b>EDH-16</b>	Dry cell battery case	12.99
<b>EME-6</b>	Earphone	10.99
<b>ERW-4C</b>	PC cable	39.99
<b>ESC-28</b>	Soft case for EBP-33N	13.99

## Alinco - continued

<b>ESC-29</b>	Soft case for EBP-37N	13.99
<b>ESC-30</b>	Soft case for EBP-34N	13.99
<b>DR-M06TH</b>	20w 6m FM Xcvr/TTP/encoder	259.99
<b>MB-130</b>	Extra mobile bracket	19.99
<b>HK-130</b>	Hardware kit for MB-130	4.99
<b>PC-15B</b>	Extra DC cable	10.99
<b>DR-135T Mk II</b>	Blk 50w 2m FM Xcvr/TTP mic	169.99
<b>DR-235T</b>	Black 25w 220 FM Xcvr w/TTP mic	249.99
<b>DR-435T</b>	Black 35w 440 FM Xcvr w/TTP mic D	259.99
<b>DR-435T Mk II</b>	Blk 35w 440 FM Xcvr/TTP mic	269.99
<b>EDC-37</b>	13.8v power cable; ignition on/off	7.99
<b>EDC-43</b>	Cig lighter cable; ignition on/off	10.99
<b>EJ-40U</b>	Dig board; DR-135T orig/TTP/235T/435T	119.99
<b>EJ-41U</b>	1200/9600 TNC unit	139.99
<b>EJ-47U</b>	Digital board; Mk II versions	179.99
<b>ERW-4C</b>	PC cable	39.99
<b>MB-130</b>	Extra mobile bracket	19.99
<b>HK-130</b>	Hardware kit for MB-130	4.99
<b>PC-15B</b>	Extra DC cable	10.99
<b>SW-620</b>	Windows programming software	29.99
<b>DR-135TP</b>	Black 50w 2m FM/TTP/1200/9600 TNC D	269.99
<b>DR-135TP Mk II</b>	Blk 50w 2m FM/TTP/1200/9600 TNC	269.99
<b>EDC-37</b>	13.8v power cable; ignition on/off	7.99
<b>EDC-43</b>	Cig lighter cable; ignition on/off	10.99
<b>EJ-40U</b>	Digital board; DR-135T/TTP/235T/435T	119.99
<b>EJ-47U</b>	Digital board; Mk II versions	179.99
<b>ERW-4C</b>	PC cable	39.99
<b>MB-130</b>	Extra mobile bracket	19.99
<b>HK-130</b>	Hardware kit for MB-130	4.99
<b>PC-15B</b>	Extra DC cable	10.99
<b>SW-620</b>	Windows programming software	29.99
<b>CC-150</b>	Cloning cable for DR-150TQ	4.99
<b>DR-605TQ</b>	50/35w 2m/440 FM/TTP/EJ24U tone sq	339.99
<b>EMS-14</b>	Desk top microphone	114.99
<b>EDS-8</b>	Adapter for EMS-14 w/DR-605TQ	28.99
<b>MB-130</b>	Extra mobile bracket	19.99
<b>HK-130</b>	Hardware kit for MB-130	4.99
<b>PC-15B</b>	Extra DC cable	10.99
<b>DR-620T</b>	50/35w 2m/440 FM Xcvr/TTP	339.99
<b>EDS-9</b>	Separation kit	45.99
<b>EJ-47U</b>	Digital board for DR-620T	179.99
<b>EJ-50U</b>	TNC unit for DR-620T	129.99
<b>MB-130</b>	Extra mobile bracket	19.99
<b>HK-130</b>	Hardware kit for MB-130	4.99
<b>PC-15B</b>	Extra DC cable	10.99
<b>SW-620</b>	Windows programming software	29.99
<b>DX-70TH</b>	Comp HF Xcvr/100w 6m/mob bkt	699.99
<b>DM-330MVT</b>	30A switching ps/meter/32A surge	179.99
<b>EB-8</b>	Front control head bracket	15.99
<b>EB-9</b>	Extra mobile bracket	32.99
<b>EDS-4</b>	Rem mt acc kit w/5' cable, 2 covers	41.99
<b>EDS-5</b>	15' microphone extension cable	36.99
<b>EDS-6</b>	15' remote cable	68.99
<b>EDX-2</b>	160-10m 200w wire auto tuner	319.99
<b>EMS-14</b>	Desk top microphone	114.99
<b>PC-25</b>	Extra DC cable	35.99
<b>DX-77T</b>	160-10m HF Xcvr	669.99
<b>DM-330MVT</b>	30A switching ps/meter/32A surge	179.99
<b>EDS-5</b>	5' microphone extension cable	36.99
<b>EDX-2</b>	160-10m 200w wire auto tuner	319.99
<b>EMS-14</b>	Desk top microphone	114.99
<b>ERW-4C</b>	PC cable	39.99
<b>PC-25</b>	Extra DC cable	35.99

## ALPHA DELTA (ALP)

<b>Extra arc-plug cartridge for LT or LT/N</b>	D	\$ 99
<b>RT-N/2G</b>	200w 1 GHz type N protector	9.99
<b>ATT-3G50</b>	200w 3GHz type N surge protector	59.99
<b>ATT-3G50-HP</b>	2kw 3GHz type N surge protector	59.99
<b>ATT-3G50U</b>	200w 500MHz surge protector	49.99
<b>ATT-3G50U-HP</b>	2kw 500MHz surge protector	49.99



## Alpha Delta - continued AES Price

ATT-3G50 Extra 200w arc-plug cartridge ...	14.99
ATT-HP/3G50HP Extra 2kw arc-plug cart ...	14.99
Delta-2 500 MHz 2-pos coax switch/protector	49.99
Delta-2/N 1.3 GHz 2-pos type N switch/protector	64.99
Delta-4 500 MHz 4-pos coax switch/protector	79.99
Delta-4/N 1.3 GHz 4-pos type N switch/protector	89.99
D-4 Extra arc-plug; Delta-2/2N/4/4N	9.99
Delta-C Kit w/ctr ins/2 end ins/static protect	29.99
SEP Extra arc-plug cart; DX-Ultra/Delta-C	15.99
Delta-CIN Antenna end insulator ...each	1.99
DX-80 80m 134' complete dipole antenna	49.99
DX-40 40m 67' complete dipole antenna	39.99
DX-20 20m 34' complete dipole antenna	39.99
DX-A 160-80-40m twin sloper antenna	59.99
DX-B 160-80-40-30m 60' sloper ant	69.99
DX-CC 80-10m 5-band 82' no trap, no tuner dipole	119.99
DX-DD 80/40m 82' Delta Dipole antenna	89.99
DX-EE 40-10m 4-band 40' no trap, no tuner dipole	99.99
DX-LB 160-80-40m 100' shortened dipole	119.99
DX-LB Plus 160/80/40/20/15/10m 100' short dip	149.99
DX-SWL AM broadcast-13m 60' SWL sloper ant	79.99
DX-Ultra AM broadcast-30MHz 80' SWL dipole	119.99
SEP Extra arc-plug cart; DX-Ultra/Delta-C	15.99
Outpost Base tripod mtg sys for mobile ant	199.99
Pathfinder 1.8-30MHz-6m dig auto ant tuner	399.99
Pathfinder 1.8-54 dig 6pos coax switch/protector	149.99
SK-1 Straight Kent key	129.99
SP-1 Single paddle Kent key	139.99
TP-1 Twin paddle iambic Kent key	149.99
VK-1 Vail Correspondent Kent straight key	198.99
Basic Technology Amateur Radio video & book	39.99

## Also see OUTBACKER

## AMECO PUBLICATIONS (AME)

4-01 Code Course Instruction Booklet	\$ 2.99
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## CODE COURSES - CASSETTE TAPES

100-T Junior code tape, 0-7 1/2 wpm	\$ 5.95
107-PC-2 IBM Morse Code Course, version 2.0	29.95

## CODE PRACTICE OSCILLATORS & CODE KEYS

K-1 Bakelite type key	\$ 10.95
K-4 Brass type key	16.95
OCM-2K Code oscillator & CW monitor kit	19.99
OCM-2W Wired oscillator & CW monitor	24.99

## PREAMPLIFIERS

TPA HF receive preamp & indoor active ant	\$ 76.99
P-9T Power supply for TPA	9.99
PT-3 2-54 MHz transceiver preamp	124.99
P-12T Power supply for PT-3	9.99

## FILTERS

HP-75T 75 ohm high-pass filter	\$ 12.99
HP-300T 300 ohm high-pass filter	12.99

## AMERITRON (AMR)

AL-80B 1kw PEP out linear amp (3-500Z)	1199.99
AL-82 1.5kw PEP out linear amp (2 3-500Zs)	2099.99
AL-572 1.3kw PEP out linear amp (4 572Bs)	1299.99
AL-800 1250w PEP out linear (3CX800A7)	1629.99
AL-800H 1.5kw PEP out amp (2 3CX800A7)	2399.99
AL-811 600w PEP out linear amp (3 811As)	599.99
AL-811H 800w PEP out linear amp (4 811As)	749.99
AL-1200 1.5kw PEP out linear (3CX-1200A7)	2199.99
AL-1500 1.5kw out linear amplifier (8877)	2599.99
ALS-500M 500w PEP out solid state mob amp	699.99
ALS-600 600w PEP out solid state mob w/ps	1129.99
ARB-704 Amplifier Xcvr interface buffer	49.99
PNP-5M Plug & play cable; FT-847	15.99
PNP-7D Plug & play cable; TS-50S/870S/2000	15.99
PNP-8D Plug & play cable; FT-920/1000 series	15.99
PNP-8M Plug & play cable; FT-817/840	15.99
PNP-3S Plug & play cable; FT-100 series	15.99

## Ameritron - continued AES Price

ARB-70412 Amp Xcvr interface; IC-706 series	49.99
PNP-13D Plug & play cable; IC-706 series	15.99
ATP-100 Amplifier tuning pulser	49.99
ATP-102 Deluxe amplifier tuning pulser	59.99
ATR-20 1.2kw PEP antenna tuner	419.99
ATR-30 3kw PEP antenna tuner	549.99
ADL-1500 1.5kw dummy load with oil	69.99
ADL-2500 2.5kw dummy load with fan	189.99
ICP-120 120v inrush protector	79.99
ICP-240 240v inrush protector	79.99
AWM-30 3kw PEP SWR/wattmeter/rem sens	139.99
QSK-5 Stand alone T/R switch	329.99
QSK-5PC PC board kit; T/R switch	229.99
CF-5 Cooling fan for QSK-5	39.99
RCS-4 4-pos wireless remote coax switch	129.99
RCS-8V 160-2m 5-pos remote coax switch	139.99
RCS-8VN 160-2m 5-pos N rem coax switch	149.99
Note: RCS-8V/VN require 8-wire control cable.	
RCS-10 DC-100MHz 8-pos remote coax switch	149.99
Note: RCS-10 requires 4-wire control cable.	

## ANTENEX (ANX)

AB-FT 118-896MHz 1/4 wave NMO whip	\$ 16.99
AB-SCANC VHF/UHF/800MHz NMO mob scan ant	29.99
BB-1442N 144-174 2.4db no gnd plane NMO mob	39.99
BB-1443 144-174MHz 3db 49" NMO mobile	39.99
BB-4303 430-450 3db 11 1/2" NMO mobile	34.99
CB-144/440C 2m/440 2/5db NMO mobile	49.99
CWB-1443 Self-tuning 144-156 3db NMO mob	49.99
CWB-4405C Self-tuning 440-470 5db NMO mob	49.99
GB-8PSTI NMO mag mt w/coax & teflon PL259	29.99
GPSU-156BNC GPS mag mt ant w/coax & BNC	99.99
LBMB-9034 Mirror mt 3/4" hole L-bracket	10.99
MB-8PST NMO hole mt w/coax & teflon PL259	15.99
TRAB-1420 142-164 Phantom whipless NMO	59.99
TRAB-4303 430-450 3db Phantom whipless NMO	29.99
VTMP NMO mt-up to 1" thick plate (UHF barrel)	15.99
Y-1363 136-150 3el 7.1db gold welded beam	119.99
Y-4303 430-450 3el 7.1db gold welded beam	99.99

## Antenna Specialists (ASP)

AP-143 2m 23" on glass cell look-alike ant D	\$ 59.99
APR143 2m 23" on glass cell look-alike ant	69.99
APR151.3 2m 3db 33" on glass antenna	69.99
KAV-382 On glass replacement mtg kit	13.99

## Antenna Supermarket (ANT)

Eavesdropper* 60-11m trap dipole SWL ant	\$ 89.99
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\*Specify S0-239 or twin-lead

## ANTENNA WORLD (ANW)

COM136-4500NP VHF/UHF port dipole/BNC	\$ 19.99
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## ARROW Antenna (ARA)

146/437-10 3 el 2m/7 el 440 handheld beam	\$ 73.00
146/437-10BP 3el 2m/7el 440 HH split bm beam	79.00
10w duplexer (installs in boom) w/BNC	59.00
10w duplexer (installs in boom) w/SMA	64.00

## ARTSCI (ART)

Lost Users Manuals	\$ 19.95
Repeater Mapbook 11th edition	14.99

## ASTRON (ASR)

RS-4L 3A ps, 4A surge, w/cig lighter socket	\$ 49.99
RS-7A 5A power supply, 7A surge	59.99
RS-10A 7.5A power supply, 10A surge	69.99
RS-12A 9A power supply, 12A surge	79.99
RS-12S 9A ps, 12A surge, w/speaker	89.99
RS-20A 16A power supply, 20A surge	99.99
RS-35A 25A power supply, 35A surge	149.99
RS-35A/220V 220v 25A ps, 35A surge	169.99
RS-50A 37A power supply, 50A surge	219.99

## Astron - continued AES Price

RS-70A 57A power supply, 70A surge	259.99
RS-20M 16A ps w/meters, 20A surge	119.99
RS-35M 25A ps w/meters, 35A surge	169.99
RS-50M 37A ps w/meters, 50A surge	239.99
RS-70M 57A ps w/meters, 70A surge	289.99
VS-20ML Variable 16A ps/meters, 20A surge	139.99
VS-35M Variable 25A ps/meters, 35A surge	189.99
VS-50M Variable 37A ps/meters, 50A surge	259.99
RM-35M 25A rack mt ps/meters, 35A surge	249.99
RM-50M 37A rack mt ps/meters, 50A surge	279.99
RM-60M 50A rack mt ps/meters, 55A surge	359.99
SS-25 20A switching ps, 25A surge	109.99
SS-25M 20A switching ps/meters, 25A surge	129.99
SS-30 25A switching ps, 30A surge	119.99
SS-30M 25A switching ps/meters, 30A surge	139.99
12/115 200w 12vdc-115vac inverter	49.99
N2412-12 10A 22-32vdc to 13.8vdc converter	49.99
N2412-24 20A 22-32vdc to 13.8vdc converter	79.99

## BMI (BMI)

972AD 14" 12/24-hour wall clock	\$ 32.99
973A 12" 24-hour wall clock	49.99

## B & W (B&W)

AP-10A 51" portable 40/20/15/10/6/2m ant	\$ 89.99
AT-55 40/20/15/10m 55' trap dipole ant ...D	89.99
AT-110 80/40/20/15/10m 110' trap dipole ...D	99.99
AS-160 160/80/40/20m 137' trap dipole ...D	149.99
AS-40 40/20/15/10m 40' trap dipole ant ...D	149.99
AS-20 20/15/10m 20' trap dipole antenna ...D	99.99
AC-1.8-30 Continuous 1.8-30 MHz vee ant	209.99
ACS-1.8-30 Continuous 1.8-30MHz stainless vee	344.99
AXS-160 160/30m 96' trap dipole antenna D	69.99
AXS-80 80/40/15m 65' trap dipole ant ...D	99.99
AC-5-30 5-30 MHz 65' folded dipole ...D	179.99
ACS-5-30 5-30 MHz stainless 65' folded dipole D	269.99
BWDS-1.8-30 1.8-30 stainless 90' folded dip	319.99
BWD-20 14-30 MHz 20' folded dipole	179.99
BWD-45 7-30 MHz 45' folded dipole	189.99
BWD-65 4-30 MHz 65' folded dipole	199.99
BWDS-65 4-30 MHz stainless 65' folded dipole	319.99
BWD-90 1.8-30 MHz 90' folded dipole	209.99
BWDS-90 1.8-30 stainless 90' folded dipole	339.99
FDMK Mtg kit; folded dipole w/3 pole installation	39.99

## BELDEN (BEL)

### 52 OHM COAXIAL CABLE

8216 RG-174 (sub-miniature)	per ft.	\$ .28
8216	100 ft. Roll	26.99
8216	500 ft. Roll	94.99
8216	1000 ft. Roll	174.99
9201 RG-58 (solid center)	per ft.	.16
9201	100 ft. cut, Δ	14.99
9201	500 ft. Roll, Δ	59.99
8240 RG-58U (solid center)	per ft.	.27
8240	100 ft. Roll	25.99
8240	500 ft. Roll	94.99
8240	1000 ft. Roll	179.99
8259 RG-58AU (stranded center)	per ft.	.29
8259	100 ft. Roll	27.99
8259	500 ft. Roll	99.99
8259	1000 ft. Roll	179.99
8219 RG-58AU (stranded, foam)	per ft.	.32
8219	100 ft. cut	29.99
8219	500 ft. Roll	104.99
8219	1000 ft. Roll	189.99
8262 RG-58UC (non-contaminating)	per ft.	.38
8262	100 ft. cut	34.99
8262	500 ft. Roll	129.99



**Belden - continued****AES Price**

8262	1000 ft. Roll	239.99
9258	RG-8X (stranded, foam) .....per ft.	.39
9258	100 ft. cut	34.99
9258	500 ft. Roll	129.99
9258	1000 ft. Roll	239.99
8237	RG-8U .....per ft.	.64
8237	100 ft. Roll	59.99
8237	500 ft. Roll	249.99
8214	RG-8U (foam) .....per ft.	.59
8214	100 ft. Roll	54.99
8214	500 ft. Roll	259.99
8214	1000 ft. Roll	489.99
9913	RG-8U (low loss) .....per ft.	59.99
9913	250 ft. Roll	129.99
9913	500 ft. Roll	239.99
9913F7	RG-8U (low loss, flexible) .....per ft.	.87
9913F7	100 ft. Roll	79.99
9913F7	250 ft. Roll	159.99
9913F7	500 ft. Roll	289.99
9251	RG-8A (non-contaminating) .....per ft.	.64
9251	100 ft. cut	59.99
9251	500 ft. Roll	279.99
8267	RG-213 (non-contaminating) .....per ft.	.87
8267	100 ft. cut	79.99
8267	500 ft. Roll	349.99

**75 OHM COAXIAL CABLE**

8241	RG-59U (73 ohm, solid center) .....per ft.	\$.29
8241	100 ft. Roll	26.99
8241	500 ft. Roll	84.99
8241	1000 ft. Roll	159.99
8238	RG-11 (75 ohm, stranded center) per ft.	.89
8238	100 ft. cut	84.99
8238	500 ft. Roll	309.99
8213	RG-11 (75 ohm, solid, foam) .....per ft.	.79
8213	100 ft. cut	69.99
8213	500 ft. Roll	259.99

**ROTOR CABLE**

8484	4-wire; 4-20 gauge .....per ft.	\$.27
8484	100 ft. cut	24.99
8484	500 ft. Roll	94.99
8484	1000 ft. Roll	179.99
8448	8-wire; 2-18, 6-22 gauge .....per ft.	.34
8448	100 ft. cut	29.99
8448	500 ft. Roll	129.99
8448	1000 ft. Roll	249.99
9405	8-wire; 2-16, 6-18 gauge .....per ft.	.74
9405	100 ft. cut	69.99
9405	500 ft. Roll	319.99
9405	1000 ft. Roll	599.99

**COPPERWELD ANTENNA WIRE**

8000	No. 14 stranded antenna wire .....per ft.	\$.24
8000	100 ft. Roll	20.99
8000	1000 ft. Roll	179.99

**No. 8 ALUMINUM GROUND WIRE**

8018	Multiples of 50 ft. ....each	\$14.99
8018	500 ft. Roll	69.99

Note: All above roll pricing is for rolls as shown only; all other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.

**FOAM COAX w/PL-259s ON BOTH ENDS**

9354	50' RG-8U foam .....per ft.	\$4.99
9355	75' RG-8U foam .....per ft.	69.99
9356	100' RG-8U foam .....per ft.	79.99

**BELMERIT (BLM)**

DM-80	Credit card size multimeter w/case ...	\$34.99
DX-405	10 func/39 range+20MHz freq multimeter	69.99

**AES Price****BENCHER (BEN)**

BY-1	Iambic keyer paddle w/black base .....	\$109.99
BY-2	Iambic keyer paddle w/chrome base .....	129.99
BY-3	Iambic keyer paddle, gold plated .....	299.99
BY-4	Iambic paddle/blk base/gold components	169.99
170-82	Merc paddle drop ship; mfr engrave call	\$50 449.99
ST-1	Single lever keyer paddle, black base ...	109.99
ST-2	Sgl lever kyr paddle, chrome base .....	129.99
RI-1	Dlx hand key w/navy knob/black base ...	105.99
RI-2	Dlx hand key w/navy knob/chrome base	129.99
XW-1	Low voltage DC fuse panel .....	D 9.99
XW-20	Fuse kit .....	D .99
XW-39/XW-30	Crimp terminal kit .....	D .99
XW-40	Screw terminal kit .....	D .99
HWK	Hardware kit; ZA-1A for 2' boom .....	D .99
YA-1	1kw low pass filter .....	85.99

**Bounty Hunter (BOU)**

Fast Tracker	Metal detector/2-tone target ID	\$ 99.99
Tracker IV	Metal detector/3-mode .....	129.99
Quick Draw II	Metal detector/full motion .....	199.99
Sharp Shooter II	Metal detector/LCD readout .....	249.99
Land Star	Metal detector/3-tone audio discrim	299.99
Land Ranger	Metal detector/programmable .....	399.99
Time Ranger	Metal detector/top-of-the-line .....	499.99
Carry Bag	For Bounty Hunter metal detectors	29.99
10" Coil	10" magnum coil; adds depth .....	49.99

**BUCKMASTER (BUC)**

HamCall	CD-ROM ham listings .....	\$ 50.99
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**BUSHNELL (BUS)**

13-0430	4x30 LiteVision compact binoculars	\$ 13.99
13-0721	7x21 compact Falcon binoculars ..D	24.99
13-1226	12x25s camo FRP compact binocs ...	29.99
13-1250	12x50 wide angle Powerview binocs	59.99
13-2514	8x21 black compact binoculars .....	21.99
13-3410	7x35 Falcon binoculars .....	29.99
26-3150	Night Vision 3.1x50 binocular .....	459.99
78-0040	90mm refractor telescope .....	D 399.99
78-0103	1.25" erecting prism .....	D 69.99
78-0200	4.5" reflector telescope .....	D 269.99
78-2010	4.5" reflector telescope .....	199.99
78-8000	8" Dobsonian reflector telescope ..D	349.99
78-9440	60mm refractor telescope .....	D 89.99
78-9470	60mm refractor telescope w/zoom ..D	129.99
78-0101	1.25" 9mm Kellner eye; 0040/6000/8000	29.99
78-0102	1.25" 25mm Kellner eyepiece .....	29.99
78-0105	1.25" 2" Barlow lens; 0040/6000/8000	39.99
10-1907	Speedster sports speed gun .....	199.99

**BUTTERNUT (BUT)**

Skyhawk 3X10	Triband 10 el, 24' beam w/baulin *	\$999.99
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\*Skyhawk 3X10 is drop-shipped (shipped direct to you from the Butternut factory). On factory drop-shippings we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Wood Dale, Illinois via UPS, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on this special order item.

HF-6VX	80/40/30/20/15/10m 26' vert ant ....	349.99
HF-9VX	80/40/30/20/17/15/12/10/6m 26' vert	399.99
A17-12	17 & 12m kit for HF-6VX .....	65.99
CPK	Counterpoise kit .....	139.99
MPS	Mounting post sleeve .....	12.99
RMK-II	Roof mounting kit w/radials .....	169.99
STR-II	Radial kit only .....	129.99
TBR-160S	160m resonator .....	129.99
HF-2V	80/40m 32' vertical .....	269.99

**Butternut - continued****AES Price**

30-MRK	30m resonator for HF-2V .....	119.99
TBR-160S	160m resonator .....	129.99

**CQ (CQX)**

Building and Using Baluns and Ununs	.....	\$ 19.99
Lew McCoy on Antennas	.....	15.99
Shortwave Propagation Handbook	.....	19.99
W6SAI HF Antenna Handbook	.....	19.99

**CSS (CSS)**

Pacterm 98	Win software; Kantronics TNCs .....	\$ 79.99
PK-Term 99	Win terminal prog; PK-12/96/232 .....	79.99

**CABLE X-PERTS (CAB)**

CXP1318FX	CXP1318FX (low loss, flexible) per ft.	\$.59
CXP1318FX	500 ft. Roll	269.99
CXP1318FC-3	3' CXP1318FX/silver teflon PL259s	14.99
CXP1318FC-50	50' CXP1318FX/silver teflon PL259s	48.99
CXP1318FC-75	75' CXP1318FX/silver teflon PL259s	67.99
CXP1318FC-100	100' CXP1318FX/silver teflon PL259s	84.99
CXP1318FC-150	150' CXP1318FX/silver teflon PL259s	121.99
CXP1318FN-3	3' CXP1318FX/type N males .....	19.99
CXP1318FN-75	75' CXP1318FX/type N males .....	81.99
CXP1318FN-100	100' CXP1318FX/type N males .....	98.99
CXP1318FN-125	125' CXP1318FX/type N males .....	116.99
CXP008C-3	3' RG8 foam/silver teflon PL259s	12.99
CXP008C-6	6' RG8 foam/silver teflon PL259s	14.99
CXP008C-25	25' RG8 foam/silver teflon PL259s	25.99
CXP008C-50	50' RG8 foam/silver teflon PL259s	37.99
CXP008C-75	75' RG8 foam/silver teflon PL259s	49.99
CXP008C-100	100' RG8 foam/silver teflon PL259s	61.99
CXP008C-125	125' RG8 foam/silver teflon PL259s	77.99
CXP213C-6	6' RG213/silver teflon PL259s .....	14.99
CXP213C-15	15' RG213/silver teflon PL259s .....	22.99
CXP213C-25	25' RG213/silver teflon PL259s .....	25.99
CXP213C-50	50' RG213/silver teflon PL259s .....	37.99
CXP213C-75	75' RG213/silver teflon PL259s .....	49.99
CXP213C-100	100' RG213/silver teflon PL259s .....	61.99
CXP08XC-3	3' RG8X clear/silver teflon PL259s	11.99
CXP08XC-25	25' RG8X/silver teflon PL259s .....	18.99
CXP08XC-50	50' RG8X/silver teflon PL259s .....	24.99
CXP08XC-75	75' RG8X/silver teflon PL259s .....	28.99
CXP08XC-100	100' RG8X/silver teflon PL259s	32.99
CXP058ARBS-3	3' RG58/BNC male-SO-239	15.99
CXP142SBI-3	3' RG142/SMA male-BNC female	19.99
CXP08XCB-3	3' RG8X/male BNCs .....	13.99
CXP08XCB-6	6' RG8X/male BNCs .....	14.99
CXP316RSSO-3	3' RG316/SMA male-SO-239	19.99
CXP522-6	6' keyer hook-up cable w/S-267 plug	19.99
235	1" tinned copper ground braid .....per ft.	.99
235	100 ft. Roll	92.99
2332	1/2" tinned copper ground braid .....per ft.	.59
2332	100 ft. Roll	52.99
AZ-10	10ga red/black DC power cord .....per ft.	.39
AZ-10	100 ft. Roll	29.99
AZ-12	12ga red/black DC power cord .....per ft.	.29
AZ-12	100 ft. Roll	19.99

**CASTLE RIDGE (CRO)****SOLID COPPERWELD ANTENNA WIRE**

AN-122	100 feet No. 12 .....	\$ 29.99
AN-123	150 feet No. 12 .....	39.99
AN-124	250 feet No. 12 .....	59.99
AN-126	500 feet No. 12 .....	99.99
AN-128	1000 feet No. 12 .....	179.99
AN-142	100 feet No. 14 .....	24.99
AN-143	150 feet No. 14 .....	29.99
AN-144	250 feet No. 14 .....	39.99
AN-146	500 feet No. 14 .....	69.99
AN-148	1000 feet No. 14 .....	119.99
AN-181	250 feet No. 18 .....	17.99



## Castle Ridge - continued AES Price

AN-182 500 feet No. 18 ..... 29.99

## CELESTRON (CEL)

4020 40x dissecting microscope .....	\$ 79.99
4030 40-500x educational microscope .....	119.99
4050 40/100/400x biological microscope .....	199.99
11015 Celestar 8 telescope .....	999.99
94162 Solar filter for Nexstar 8/Celestar 8 .....	79.99
11021 NexStar 8i telescope .....special order	1199.99
93593 Standard tripod .....	149.99
93962 NexStar hand control .....	149.99
11022 NexStar 8i telescope/tripod/hand control .....	1299.99
93501 Heavy duty tripod .....	299.99
93963 GPS module - CN16 .....	199.99
11033 NexStar 5i telescope .....	899.99
93497 Standard tripod .....	149.99
93962 NexStar hand control .....	149.99
93963 GPS module - CN16 .....	199.99
11051 G-5 w/motor drive telescope .....	679.99
11052 Nexstar 8 GPS telescope .....	1999.99
11053 NexStar 11 GPS telescope .....	2999.99
21016 C-4R refractor telescope .....	429.99
21019 C-6R refractor telescope .....	799.99
21052 FirstScope 60AZ refractor telescope ...	99.99
21072 FirstScope 80EQ-WA refractor telescope ...D	199.99
21086 FirstScope 80EQ refractor telescope .....	299.99
94135 Solar filter for Firstscope 80EQ/WA ...	34.99
22062 NexStar 60GT telescope .....	249.99
22082 NexStar 80GT telescope .....	349.99
302160 Soft case for Nexstar 60/80 .....	59.99
94135 Solar filter for Nexstar 60GT/80GT ...	34.99
31034 Tabletop 76 reflector telescope .....	99.99
31044 FirstScope 114 4.5" reflector telescope ..	249.99
31056 C-6N reflector telescope .....	399.99
31132 NexStar 130GT reflector telescope .....	399.99
31142 NexStar 114GT reflector telescope .....	439.99
52200 60mm pro zoom spotting scope .....	199.99
52211 60mm wildlife zoom spotting scope/tripod	169.99

## LENSES (not for 31034)

93312 1.25" 17mm ocular Plossl lens .....	\$ 49.99
93318 1.25" 9mm Omni lens .....	49.99
93320 1.25" 15mm Omni lens .....	49.99
93326 1.25" 2x Omni Barlow lens .....	59.99
93351 1.25" 7.5mm Ultima lens .....	129.99
93352 1.25" 12.5mm Ultima lens .....	129.99
93353 1.25" 18mm Ultima lens .....	129.99
93387 1.25" 5mm X-Cel lens .....	89.99
93389 1.25" 10mm X-Cel lens .....	89.99
93391 1.25" 18mm X-Cel lens .....	89.99
93507 1.25" 2x deluxe Barlow lens .....	59.99
94303 Plossl lens/filter kit w/carrying case +	99.99
51630 Star pointer finderscope .....	30.99
93590 Red Astro Lite flashlight .....	5.99
93700 CD-ROM "The Sky for Celestron" .....	29.99
93720 40 Planisphere & planet finder .....	6.99
93722 Sky Map .....	19.99
94108 Diagonal, erect image 90° .....	49.99
94119-A 1.25" moon filter .....	15.99
94119-10 Eyepc filter set (21/80/ND13/polarizing)	49.99
94126-A Model A LPR filter; for 1 1/2" eyepieces	69.99

Sorry, no exports on Celestron products.

## CENTAUR (CEN)

B11W10-50 1:1 3kw PEP balun for dipole ...D	\$ 54.99
B11Y10-50 1:1 3kw PEP balun for yagi .....	54.99
B41Y10-50 4:1 3kw PEP balun for yagi .....	69.99
B41LW10-50 4:1 ladder line to coax balun ..D	69.99

## Channel Master (CHA)

9521A Prog light duty rotor/IR rem cont/3-wire	\$ 99.99
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## AES Price

## CLOCKS

BMI 972AD 14" 12/24-hour wall clock .....	\$ 32.99
BMI 973A 12" 24-hour wall clock .....	49.99
MFJ 105C 24-hour quartz wall clock .....	19.99
MFJ 107B 24-hour digital clock .....	9.99
MFJ 108B 24/12-hour dual disp digital clock .....	19.99
MFJ 112B Deluxe world map clock .....	24.99
MFJ 113 24/12-hr 1.8" LED clock/batt back-up .....	19.99
MFJ 115 DX'er 24-hr analog world wall clock ..	24.99
MFJ 116DC 12-hour 12vdc LED clock .....	9.99
MFJ 118 Giant 24/12 hour LCD clock .....	24.99
MFJ 123 Eternity solar atomic clock .....	79.99
MFJ 125 Calendar 24-hour analog wall clock ..	29.99
ORE RM-116E Exactset radio controlled clock	39.99

## COAX SEAL (UNV)

104 3/4" x 60" coax seal .....	\$ 3.99
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## Coaxial Dynamics (COA)

81000-A Wattmeter w/SO-239s .....	\$260.99
83000-A Peak reading wattmeter w/SO-239s	393.99
82004 50w 2-30MHz element .....	87.99
82005 100w 2-30MHz element .....	87.99
82006 250w 2-30MHz element .....	87.99
82007 500w 2-30MHz element .....	87.99
82008 1000w 2-30MHz element .....	87.99
82009 2500w 2-30MHz element .....	125.99
82010 5000w 2-30MHz element .....	125.99
82013 10w 25-60MHz element .....	71.99
82014 25w 25-60MHz element .....	71.99
82015 50w 25-60MHz element .....	71.99
82016 100w 25-60MHz element .....	71.99
82029 10w 100-250MHz element .....	71.99
82031 50w 100-250MHz element .....	71.99
82033 250w 100-250MHz element .....	71.99
82046 10w 400-1000MHz element .....	71.99
82048 50w 400-1000MHz element .....	71.99
82049 100w 400-1000MHz element .....	71.99
88000 N female quick match connector each	9.99
88800 Carrying case for meter .....	65.99

## COBRA (COB)

19DX III AM Mobile CB .....	\$ 49.99
19LTD II AM Mobile CB .....	54.99
21LTD ST Sound Tracker AM Mobile CB .....	74.99
25LTD (25LTD Classic) AM Mobile CB .....	89.99
25WXNW ST Night Watch Sound Tracker AM Mob CB/WX	109.99
29LTD (29LTD Classic) AM Mobile CB .....	99.99
29NW Night Watch AM Mobile CB .....	119.99
29WXNW ST Night Watch Sound Tracker AM Mob CB/WX	129.99
75WX ST Sound Tracker AM Mobile CB w/WX	99.99
HH-37 ST Sound Tracker handheld CB .....	59.99
HH-Road Trip Sound Tracker HH CB/WX/mag ant	79.99
148NW ST Night Watch Sound Tracker SB/AM Mob CB	179.99
HGA-1000 Magnet mt CB antenna .....	19.99
HGM-77 Noise canx/amplified mobile mic ...	24.99
PR-3000-2DX 22ch 2w GMRS/FRS HH ...pair	79.99

## COMET (CMT)

### MOBILE ANTENNAS

B-10 2m/440 2.15db 12" cell look-alike ant	\$ 39.99
B-15NMO 2m/440 2.15db 12" cell look-alike NMO	39.99
C-75M 2m/440 2.15/5.5db 38" foldover ant	54.99
C-75NMO 2m/440 2.15/5.5db 38" foldover NMO	54.99
C-767 2m/440 3.5/6db 40" foldover ant .....	59.99
C-767NMO 2m/440 3.5/6db 40" foldover NMO ..	59.99
CA-2X4SR 2m/440 3.8/6.2db 40" mob ant ...	74.99
HA-050 6m 33" w/wave mobile antenna .....	62.99
HP-32 2m/440 3.5/5db 34" 350/250w ant ...	89.99
M-24B 2m/440 1.7/4.1db mag mt ant w/BNC	39.99
M-24M 2m/440 1.7/4.1db mag mt ant w/PL259	39.99
SBB-1 2m/440 1.5/2.15db 16" flex mobile ...	39.99

## Comet - continued

## AES Price

SBB-1NMO 2m/440 1.5/2.15db 16" flex NMO	39.99
SBB-2 2m/440 2.15/3.8db 18" black mobile	39.99
SBB-2NMO 2m/440 2.15/3.8db 18" blk NMO	39.99
SBB-5 2m/440 3/5.5db 38" black mobile ant	54.99
SBB-5NMO 2m/440 3/5.5db 38" black NMO ...	54.99
SBB-7 2m/440 4.5/7.2db 4" 7" black mob ant	74.99
SBB-7NMO 2m/440 4.5/7.2db 4" 7" blk NMO	74.99
SB-14 6m/2m/440 43" chrome mobile ant ...	64.99
SB-15 6m/2m/440 2.15/4.5/7.2db 5' chr mob	79.99
SBB-25 2m 4.1db black mobile antenna .....	44.99
SBB-25NMO 2m 4.1db black NMO mob ant ...	44.99
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N ...	79.99
SB-123 1.2GHz 7.2db 24" type N mobile ant	49.99
SBB-224 2m/220/440 2.15/3.2/5.5 blk mob ...	74.99
SBB-224NMO 2m/220/440 2.15/3.2/5.5 blk NMO	74.99
SF-245 2.4 GHz 7db 18" fg type N ant .....	69.99
UHV-4 10/6/2/440 54" mobile ant; FT8900R	109.99
UHV-6 40/15/10/6/2m/440 7" 2" mobile ant	149.99
L-3.5 80m loading coil for UHV-6 .....	34.99
L-14 20m loading coil for UHV-6/CA-HV .....	29.99
L-18 17m loading coil for UHV-6/CA-HV .....	29.99

## MOBILE MOUNTS

304M Mobile mt, 13' coax w/UHF connectors	\$ 24.99
304N Mobile mt, 13' coax w/type N .....	28.99
305M Mobile mt, 16.5' coax w/UHF connectors	27.99
504N Roof mount, 13' coax w/type N .....	31.99
AD-10N NMO mount to female N adapter .....	17.99
AD-15M NMO mount to SO-239 adapter .....	17.99
AD-25M SO-239 to NMO mount adapter .....	14.99
AD-35 3/4-24 stud to UHF mobile mt adapter	19.99
CK-3M Dlx 2-step 10' cable w/UHF connectors	33.99
CK-3M5 Dlx 2-step 16.5' cable w/UHF connects	37.99
CK-5N Dlx 13' cable assembly w/type N .....	47.99
CM-5M Hvy duty mag mt, coax, max 4' ant ..	24.99
CP-5 3/8-24 HD 3/4-24 mt (RS-730) w/16.5' coax	66.99
CP-5M Hvy duty UHF mt (RS-730) w/16.75' coax	66.99
CP-5NMO Hvy duty NMO mt (RS-730) w/16.5' coax	66.99
CQ-5M Dlx black QD trunk lip mt/17' coax ...D	66.99
CQ-5N Dlx black QD trunk lip mt/17' coax/N ...D	49.99
CR-5M Std coax assy, 16.5' coax, UHF conn	19.99
CR-5M Trunk lip mount w/16.5' coax .....	39.99
GT-5M Dlx trunk lip mt w/coax; matches SB ..	67.99
RS-9 Trunk lip mount, no coax .....	11.99
RS-520 Mini heavy duty trunk/hatch mount ..	28.99
RS-560C Luggage rack mount, no coax .....	35.99
RS-720 Hatch/rear door/trnk multi-adj mt ...	28.99
RS-720NMO Hch/rear door/trnk multi-adj NMO mt	28.99
RS-730 HD rear van/SUV door/trnk lip mt, no coax	29.99
WS-1M Window clip mt w/UHF connectors ...	59.99

## BASE STATION ANTENNAS

CA-712EF 440 9db 10' 5" base antenna .....	\$109.99
CA-ABC22A 2m 6.5db 9' 5" base/prtr ant .....	69.99
CA-ABC23 2m 7.8 db 13' 4" base/prtr ant .....	99.99
CA-F726F 440-470 6db 3' 6" tunable ant .....	109.99
CA-52HB4 6m 4 el 10.4db 10' 6" boom beam	119.99
CK-33 2m/220/440 6.5/7.8/9db 10.25" ant	179.99
CYA-1216E 1.2GHz 16el 16.6db 4' 5" bm N beam	129.99
CYA-2412 2.4GHz 12el 15.5db 2' 6" bm N beam	129.99
DS-15 6m/2m/440/900/1.2 discone ant ...D	69.99
DS-150S 6m/2m/440/900/1.2 discone/60' coax	99.99
GH-50 6m 2.15db 7' 10" fg base antenna ....	99.99
GP-3 2m/440 4.5/7.2db 5' 11" N base/prtr ant	99.99
GP-6 2m/440 6.5/9db 10' 2" base/prtr ant ...	149.99
GP-9 2m/440 8.5/11.9db 17' 8" base/prtr ...	179.99
GP-9N 2m/440 8.5/11.9db 17' 8" N base/prtr	179.99
GP-15 6/2m/440 3/6/2/8.6db 7' 11" base .....	154.99
GP-21/CA-1221S 1.2 14.8db 8' N base/prtr ...	149.99
GP-24 2.4GHz 12.4db 5' 11" N base/prtr ...	179.99
GP-24S 2.4GHz 9.9db 3' 7" N base/prtr ...D	99.99
GP-98 2m/440/1.2 6.5/9/13.5db 9' 8" N ant	189.99
KP-20 900 MHz 9.2db 7' 4" type N base/prtr	112.99



## Comet - continued

## AES Price

PYA-913	900MHz 13el 15.8db 4' 8" type N beam	139.99
<b>DUPLEXERS AND TRIPLEXERS</b>		
CF-142	1.3-150/200-480 600/400w UHF/leads	\$ 69.99
CF-360A	1.3-30/50-470 600w UHF w/leads	69.99
CF-360B	1.3-30/50-470 600w UHF/common lead	69.99
CF-416A	2m/440 800/500w UHF w/leads	46.99
CF-416B	2m/440 800/500w UHF/N w/leads	46.99
CF-416C	2m/440 800/500w N/UHF/N leads	49.99
CF-416W	1.3-250/400-1400 400/200w N/leads	69.99
CF-530	1.3-90/125-470 600w UHF w/leads	69.99
CF-530C	Backwards duplexer for FT-8900R	69.99
CF-706A	1.3-56/75-470 350w UHF w/leads	69.99
CF-416D1	2m/440 800/500w UHF/UHF/N, no leads	45.99
CF-416D2	2m/440 800/500w SO239, no leads	53.99
CF-416D3	2m/440 800/500w all UHF, no leads	45.99
CFX-324A	2m/220/440 600w UHF w/leads	88.99
CFX-324B	2m/220/440 600w UHF, no leads	85.99
CFX-514	HF/2m/440 800/800/500w UHF w/leads	79.99
CFX-514J	HF/2m/440 800/800/500w UHF, no leads	74.99
CFX-514N	HF/2m/440 800/800/500w UHF/N w/leads	79.99
CFX-4310C	1.3-150/440/1.2 triplexer, no leads	79.99
CFX-514D	HF/6m/2m/440 800/800/500w UHF, no leads	74.99
<b>HT &amp; HANDHELD SCANNER ANTENNAS</b>		
BNC-24	2m/440 17" 2.15/5.3db BNC whip	\$ 22.99
CH-32	2m/440 1.75" BNC Miracle Baby ant.	29.99
CH-75	2m/440 0.3.2db 14.75" BNC ant	25.99
CHF-412	40/15/2m 28" BNC duct; FT-817	D 49.99
HM-05	18" BNC male - SO-239 adapter/cable	9.99
HS-05	18" SMA male - SO-239 adapter/cable	9.99
HT-224	2m/220/440 11" SMA antenna	47.99
SH-55	2m/440 1.5/3.2db 15" BNC ant	33.99
SH-95	2m/440/1.2 1.5/2.15/5.5db BNC ant.	34.99
SMA-3	2m/440 1.2/1.7db 9.75" SMA ant	39.99
SMA-24	2m/440 17" 2.15/5.3db SMA whip	22.99
SMA-501	2m/440/900 1.5" SMA antenna	29.99
SMA-503	2m/440 8.75" SMA antenna	29.99
SMA-703	2m/440/1.2GHz 6.5" SMA ant	31.99

## Comm Outfitters (COF)

EXP-1 Expedition Pack for Yaesu FT-817 ..... \$ 99.99

## COMM-SPEC (COM)

ID-8	Automatic morse station identifier	\$ 69.99
SS-64	64-tone mini prog CTCSS encoder	28.99
TE-32	32-tone CTCSS prog encoder box	49.99
TS-64DS	64-tone CTCSS prog decoder/decoder	57.99

## CONNECTORS

### AMPHENOL COAX CONNECTORS (AMP)

83-15P-1050	Male coax plug (PL-259)	\$ 1.99
83-15P	Silver plated coax plug (PL-259)	2.99
Van Gorden (VAN)	Silver plated teflon PL-259	2.99
83-185	Reducer for RG-58 (UG-175)	.99
83-168	Reducer; RG-59/RG-8X (UG-176)	.99
83-1AP	Right angle adaptor (UG-646)	8.99
83-1J	Double female adaptor (PL-258)	6.99
83-1R	Female chassis mt socket (SO-239)	3.99
83-1H	Hood; in-line use w/83-1R (UG-106)	1.99
83-1T	T-connector adaptor (M-358)	11.99
83-877	Double male adaptor	12.99
83-878	Single hole 1/4" chassis socket	2.99
81-002	BNC male connector for RG-58	4.99
81-012	BNC male connector; RG-59/RG-8X	2.99
81-221	BNC female chassis socket	2.99
82-24	Type N female chassis mt socket	7.99
82-61	Type N male connector for RG-8	8.99
82-64	Type N right angle adaptor	12.99
(VAN) N connector	Type N connector for 9913	4.99
82-202-1006	Type N male; 8214/9913/9913F	7.99
82-209	Type N female in-line for RG-8	9.99
34025	Type N male connector for RG-58	8.99

## Connectors - continued AES Price

<b>AMPHENOL COAX ADAPTORS (AMP)</b>		
2900	SO-239 to BNC male adaptor	\$ 14.99
4400	SO-239 to Type N male adaptor	14.99
31-28	BNC female to PL-259 adaptor	16.99
(HOU) SMA-872	SO-239 to SMA plug adaptor	5.99
<b>AIM CONNECTORS, PLUGS &amp; ADAPTORS (AIM)</b>		
19-1289	8-pin female mic plug	D \$ 4.99
(PHI) 61-608B	8-pin female mic plug	4.99
25-7351	Chassis mt SO-239 double female	3.99
25-7365	BNC female to SO-239	3.99
25-7420	BNC male to SO-239	2.99
26-8010	Type N double female	3.99
26-8011	Type N chassis mount	2.99
26-8015	N male to SO-239	4.99
26-8016	BNC female to N male	4.99
26-8017	BNC male to N female	4.99
26-8027	N male for RG-8X	D 4.99
27-8120	BNC female to PL-259	2.99
27-8130	BNC double male	3.99
27-8140	BNC T; 2 female, 1 male	2.99
27-8142	BNC T, 3 male	4.99
27-8450	BNC chassis mt, 4 screw holes	1.99
27-8460	1/4" hole BNC chassis mt	4.99
27-8470	Dual BNC chassis mount	3.99
29-3855	BNC female to SMA male	3.99
29-4140	SO-239 to mini PL-259	2.99
<b>VANCO MICROPHONE CONNECTORS (VCO)</b>		
CB2-2P	Panel mt 2-pin male	\$ .09
CB3-3	3-pin female mic plug	.49
CB3-3P	Panel mt 3-pin male	.09
CB4-4	4-pin female mic plug	4.99
CB4-4P	Panel mt 4-pin male	.49
CB5-5	5-pin female mic plug	3.99
CB5-5P	Panel mt 5-pin male	.09
CB6-6	6-pin female mic plug	4.99
CB6-6P	Panel mt 6-pin male	.09
(AIM) 19-1289	8-pin female mic plug	4.99
CB8-8P	Panel mt 8-pin male	5.99
P-50	5-pin DIN plug	.09

### KENWOOD DIN PLUGS (KEN)

7-pin DIN plug	\$ 4.99
8-pin DIN plug	6.99
13-pin DIN plug	9.99

### VANCO Mic Holders/Mini Plugs/Cig Plugs (VCO)

MH-1	Magnetic mic holder	\$ 1.69
MH-2	Regular mic holder	1.49
P-25	2.5mm sub-miniature phone plug	.05
P-35	3.5mm miniature phone plug	.69
(DAL) 15-0293	3.5mm mono phone plug	.19
(HOU) AP-115	1/4" metal stereo plug	1.99
(HOU) AP-135	3.5mm stereo mini phone plug	.69
P-12R	2-contact cigarette plug	1.99
P-12V	Cig lighter plug w/leads	1.99
P-212	2-outlet cigarette plug adaptor	4.99
P-212B	Dual cigarette lighter socket adaptor	8.99

## Connect Systems (CSY)

CS-800	Full duplex patch & repeater controller	\$369.99
CS-900	Simplex interconnect	369.99

## CROSS DEVICE (CRS)

STUF	Coax connector waterproofing filler	\$ 4.99
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## CUSHCRAFT (CUS)

At Cushcraft's request, amateur radio dealers are not authorized warranty depots for Cushcraft Antennas. All warranty issues should be directed to the Technical Support Department/Warranty at Cushcraft (603) 827-7877.

### VHF/UHF FM BEAMS\* (Vertical polarization)

A148-3S	2m, 3 el wideband beam, 7.8db	\$ 69.99
A148-10S	2m, 10 el wideband beam, 13.2db	109.99

## Cushcraft - continued AES Price

A449-6S	440 MHz, 6 el, 3' boom, 10 db	66.99
A449-11S	440 MHz, 11 el, 4.5' boom, 13 db	89.99
*Antennas can be mounted vertically or horizontally!		
<b>2M/440 FM BEAMS* (Vertical polarization)</b>		
AZ70-6S	2m/440, 3/3 el, 2.8' boom, 7.8 db	\$ 89.99
AZ70-10S	2m/440, 5/5 el, 6.17' boom, 10 db	109.99
*Antennas can be mounted vertically or horizontally!		
<b>TRI-BAND 6M/2M/440 BEAMS</b>		
A6270-13S	6m/2m/440, 3/5/5el, 8.66m, 8/10/10db	\$199.99
ASL-670	50-450MHz 14el 6.7' boom 6db LP	269.99
<b>FM RINGOS - 1/2 Wave Verticals</b>		
AR-10	10m FM Ringo, 17.6', 3db, 1000w	\$ 89.99
AR-6	6m FM Ringo, 10.1', 3db, 1000w	89.99
AR-2	2m FM Ringo, 3.9', 3db, 1000w	54.99
AR-450	440MHz FM Ringo, 1.4', 3db, 500w	40.99
<b>RINGO RANGERS - FM Verticals</b>		
ARX-2	2m FM Ringo Ranger	\$ 64.99
ARX-2B	2m FM Ringo Ranger II, 14', 7db, 1000w	74.99
ARX-220B	220 FM Ringo Ranger II, 9.3', 7db, 500w	74.99
ARX-450B	440FM Ringo Ranger II, 4.9', 7db, 500w	74.99
<b>DUAL-BAND 2M/440 FM RINGOS</b>		
AR-270	2m/440MHz FM, 3.75', 3.5/5db, 250w	\$104.99
AR-270B	2m/440 MHz FM, 7.7', 5.5/7.5db, 250w	109.99
<b>TWIST, OSCAR BEAMS (Horiz/Vert Polarization)</b>		
A148-20T	2m 20el 10.8'bm 11.1db twist	\$154.99
719B	432 19 el 13.5' boom 15.5db	169.99
<b>BOOMER ANTENNAS</b>		
124WB	2m Boomer, 4 el, 4' boom, 10.2 db	\$ 99.99
13B2	2m Boomer, 13 el, 15' boom, 15.8 db	169.99
17B2	2m Boomer, 17 el, 31' boom, 18 db	269.99
26B2	2 13B2s vertically stacked	449.99
224WB	220 Boomer, 4 el, 3' boom, 10.2db	79.99
<b>BOOMER POWER DIVIDERS</b>		
PD-2	Power divider for 2 13B2s	\$ 71.99
PD-4	Power divider for 4 13B2s	84.99
<b>VHF/UHF BEAMS* (Horizontal polarization)</b>		
A50-3S	6m, 3 el, 6' boom, 8 db, stainless hdwre	\$124.99
A50-5S	6m, 5 el, 12' boom, 10 db, stainless hdwre	189.99
A50-6S	6m, 6 el, 20' boom, 11db, stainless hdwre	299.99
A148-10S	2m, 10 el wideband beam	109.99
A430-11S	430 MHz, 11 el, 4' boom, 13 db	89.99
*Antennas can be mounted vertically or horizontally!		
<b>MOBILE ANTENNAS</b>		
CS-28M	10m magnet mt antenna	\$ 59.99
CS-50M	6m magnet mt 3 db antenna	59.99
CS-147A	2m coil & whip only	39.99
CS-147M	2m magnet mt 3 db antenna	59.99
CS-220M	220 magnet mt 3 db antenna	59.99
CS-450M	440 magnet mt 5 db antenna	59.99
<b>DUAL-BAND 2M/440 MOBILE ANTENNAS</b>		
CS-270A	2m/440 coil & whip only	\$ 59.99
CS-270M	2m/440 3.7/6 db magnet mt ant	84.99
<b>MOUNTS ONLY FOR MOBILE ANTENNAS</b>		
CS-MG	Magnetic mount	\$ 29.99
CS-MGN	Magnetic mount w/N connector	34.99
CS-TL	Trunk lip mount	29.99
<b>MULTIBAND HF VERTICAL ANTENNAS</b>		
MA-5V	20/17/15/12/10m 14.7' vertical ant	\$219.99
MA-6V	20/17/15/12/10/6m 14.7' vertical ant	259.99
R-6000	20/17/15/12/10/6m 19' vertical	329.99
R-8	40/30/20/17/15/12/10/6m 28.5' vert	489.99
R-8GK	Guy kit for R-8	49.99
<b>ROTATABLE HF DIPOLES</b>		
D-3	20/15/10m World Ranger dipole	\$259.99
D-3W	30/17/12m rotatable dipole	259.99
D-4	40/20/15/10m World Ranger dipole	369.99
D-40	40m World Ranger dipole	319.99



<b>Cushcraft - continued</b>	<b>AES Price</b>
<b>BIG THUNDER HF TRI-BAND BEAM</b>	
X-7 20/15/10m, 7 el, 18' boom, 12.5/13db ..	\$669.99
X-740 40m add-on kit for X-7 .....	299.99
<b>BIG THUNDER HF MONOBAND BEAM</b>	
XM-240 40m, 2 el, 23' boom, 7 db .....	\$719.99
TEN-3 10m, 3 el, 8' boom, 8 db .....	199.99
<b>MULTIBAND HF BEAM ANTENNAS</b>	
A-3S 20/15/10m, 3el, 14'bm, 8db, stainless hdwr	\$449.99
A-743 40m or 10 MHz add-on kit; A-3/A-3S	179.99
A-4S 20/15/10m, 4el, 18'bm, 8.9db, stainless hdwr	549.99
A-744 40m or 10 MHz add-on kit; A-4/A-4S	179.99
A-3WS 17 & 12m, 3 el, 14' boom, 8 db .....	369.99
A-103 30m add-on kit for A-3WS .....	179.99
ASL-2010 13.5-32MHz Bel 18' bm 6.4db LP ..	749.99
MA-5B 20/17/15/12/10m 7.3' boom mini beam	349.99

<b>LIGHTNING ARRESTORS</b>	
LAC-4 200w SO-239 gas tube arrestor .....	\$ 49.99
LAC-4H 2kw SO-239 gas tube arrestor .....	54.99
LAC-4N 200w type N gas tube arrestor .....	59.99
LAC-4NH 2kw type N gas tube arrestor .....	64.99
LC-2 Extra 200w cartridge for LAC-4/4N ..	15.99
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	17.99
5VB Vinyl connector boots .....	pack of 5 15.99

<b>Cutting Edge (CUT)</b>	
<b>POWER PORT</b>	
HI-D1 Radio glove; Ali DJC5T/DJX2T/Yae VX1R	\$ 19.99
HI-5X Radio glove; lco IC-Q7/R-2/Yae FT-11 ..	19.99
HI-51 Radio glove; Yaesu VX-5R .....	19.99
HI-6 Radio glove; ADI PR52/ALI S11/V5/lco T81/Yae FT50	19.99
HM-817 WorldPack; Yaesu FT-817 .....	73.99
HMP-II WorldPack II backpack; mini HF Xcvr	67.99
HR-8AF 8AH gel-cell w/2.5 hr fast cgr .....	119.99
HPP-8A 8AH gel-cell w/overnight cgr .....	73.99
PPMDC Multi-tip/volt reg DC-DC adapt .....	6.99
PPSCA Solar cell cigarette adapter .....	10.99

<b>DCI (DCI)</b>	
145-2H 2m 144-146MHz 200w bandpass filter	\$ 99.99
146-4H 2m 144-148MHz 200w bandpass filter	99.99
223.5-3H 222-225MHz 200w bandpass filter	109.99
2m/220 models w/N connectors add \$10 special order	
435-10C 430-440MHz 200w N bandpass filt	119.99
445-10C 440-450MHz 200w N bandpass filt	119.99
146/444-DB 144-148/438-450 200w bp filter	169.99

<b>DC SALES (DCS)</b>	
Tenna Hitch 3/4-24 trailer hitch antenna mt ..	\$ 38.99
<b>DAIWA (DAI)</b>	
CN-101 1.8-150 15/150/1.5kw SWR/pwr meter/light	\$ 99.99
CN-103M 140-525 20/200w SWR/power meter	99.99
CN-801H 1.8-200 20/200/2kw SWR/pwr meter	149.99
CN-801V 140-525 20/200w SWR/power meter ..	154.99
CS-201 2-position 600 MHz coax switch .....	26.99

<b>DAVIS (DAV)</b>	
6150 Wireless Vantage Pro weather station ..	\$539.99
7400 Perception II indoor WX unit .....	139.99
7425 Wizard III weather station .....	179.99
7440 Monitor II weather station .....	269.99
7852 Rain Collector II, 0.01" .....	69.99
7977 Electronic rain counter, 0.01" ...D	4.99
7859 External temp/humd Sensor II; 7440	119.99
7862 Weatherlink Win interface/software...	149.99
7866 Weatherlink Mac interface/software...	139.99
7870 Modem adapter for 7862/7866 ...Δ	1.99
7867 Weatherlink Mac to Win conv kit ...Δ	1.99
7868 Weatherlink Win to Mac conv kit ...Δ	1.99
7873 Cig lighter power cord .....	10.99
7876-040 4-conductor 40' extension cable ..	18.99
7878-040 6-conductor 40' extension cable ..	22.99

<b>Davis - continued</b>	<b>AES Price</b>
7880 8-conductor 25' junction box cable Δ	4.99
7881 8-conductor 50' junction box cable ..	25.99
7882 8-conductor 100' junction box cable ..	45.99
7890 Mast mount for anemometer .....	14.99
0131 Weather forecasting quick reference card	9.99
0271 Turbo Meter handheld dig wind indicator	139.99
0281 Wind Wizard handheld wind indicator ..	47.99

<b>DIAMOND (DIA)</b>	
<b>SWR/POWER METERS</b>	
SX-20C HF/6m/2m 30/300w meter .....	\$ 89.99
SX-40C 144-470 (220 w/correction) 15/150w	79.99
SX-100 1.6-60 MHz 30/300/3kw PEP meter ..	134.99
SX-200 1.8-200 MHz 5/20/200w PEP meter ..	94.99
SX-400 140-525 MHz 5/20/200w PEP meter ..	114.99
SX-600 Dual band 1.8-160/140-525 200w PEP mtr	169.99
SX-1000 1.8-160/430-1300MHz 200w PEP meter	214.99
<b>HT &amp; HANDHELD SCANNER ANTENNAS</b>	
RH-3 2m/440 1.75" BNC mini HT duck .....	\$ 24.99
RH-77CA 2m/440 15" BNC rubber gain ant ..	24.99
RH-205 2m 3/4 wave telescopic HT antenna ..	24.99
RH-519 2m/440 8.3" flexible BNC whip .....	27.99
RH-707 2m/440 8 1/2" tilttable BNC whip .....	33.99
RH-951S 2m/440/1.2GHz 15" BNC slim duck	44.99
SRH-77CA 2m/440 15" SMA rubber gain ant	29.99
SRH-320A 2m/220/440 flexible SMA whip ..	49.99
SRH-519 2m/440 8.3" flexible SMA whip .....	32.99
SRH-805 2m/440/1.2GHz 1.75" SMA ant .....	27.99
SRH-815 2m/440/1.2GHz 6" flex SMA whip ..	36.99
SRH-999 6m/2m/440/1.2GHz 20" SMA whip ..	59.99

<b>MONO-BAND MOBILE ANTENNAS</b>	
HF-6FX 6m 2.15db 44" mobile antenna .....	\$ 69.99
HF-50CX 6m 3.5db 71" mobile antenna .....	99.99
M-285 2m 3.4db 52.4" mobile antenna .....	31.99
M-685 6m 2.15db 52.4" mobile antenna .....	31.99
MG-200 2.4GHz 7db 23.6" N mobile ant .....	99.99
NR-2C 2m 4.1db 55.5" mobile antenna .....	39.99
NR-22L 2m 6.5db 96.8" mobile antenna .....	69.99
NR-124 1.2GHz 8.4db 25" N mobile antenna	64.99
SG-2000HD 2m 5.2db 62.6" 250w mob ant ..	89.99

<b>DUAL-BAND MOBILE ANTENNAS</b>	
MR-77 2m/440 2.15/3.4db 20" magnetic ant	\$ 39.99
MR-77SMA 2m/440 2.15/3.4db 20" mag w/SMA	44.99
NR-72BNMO Black 2m/440 2.15db 14" NMO	41.99
NR-73BNMO Blk 2m/440 2.15/5.5db 34" NMO	57.99
NR-770HA 2m/440 3/5.5db 40" mobile ant ..	56.99
NR-770HB Black 2m/440 3/5.5db 40" mobile	59.99
NR-770HNMO 2m/440 3/5.5db 40" NMO mobile	56.99
NR-770HBNMO Blk 2m/440 3/5.5db 40" NMO	59.99
NR-770RA 2m/440 3/5.5db 39" mobile ant ..	51.99
NR-7900A 2m/440 3/7.6db 57" hi pwr mob ant	89.99
SG-M510 2m/440 2.15/5.5db 37" mob ant ..	59.99
SG-7000A 2m/440 2.15/3.8db 19" mobile ..	69.99
SG-7500A 2m/440 3.5/6db 41" mobile ant ..	79.99
SG-7500NMO 2m/440 3.5/6db 41" NMO ant ..	79.99
SG-7900A 2m/440 5/7.6db 62" mobile ant ..	114.99
SG-7900ANMO 2m/440 5/7.6db 60" NMO ant	114.99
K-400CNMO Hachtrnk mt/coax; SG7900ANMO	69.99

<b>TRI-BAND MOBILE ANTENNAS</b>	
CR-320A 2m/220/440 2.15/3.8/5.5db 36" ....	\$ 89.99
CR-627B 6m/2m/440 2.15/4.5/7.2db 60" ant	99.99
CR-627BNMO 6m/2m/440 2.15/4.5/7.2db 60"	99.99
HV-7A 10/6/2m/440 54" UHF mount mobile ant	109.99
HVC-7 40m loading coil for HV-7A/MV-3A ..	44.99
HVC-14 20m loading coil for HV-7A/MV-3A	37.99
HVC-18 17m loading coil for HV-7A/MV-3A	37.99
HVC-21 15m loading coil for HV-7A/MV-3A	37.99
NR-2000NA 2m/440/1.23.15/6.3/9.7db 39" N mob	89.99
SG-M911 6m/2m/440 2.15/3.5/8db 41" mob	69.99
<b>QUAD-BAND MOBILE ANTENNAS</b>	
CR-8900A 10m/6m/2m/440 0/0/2.15/5.5db 50"	\$ 99.99

<b>Diamond - continued</b>	<b>AES Price</b>
<b>MAGNET MOUNTS</b>	
DPK-4NM-N Hvy dty mag mt, cbl, N, 45" max	\$ 45.99
K-702M Hvy dty mag mt, 6 1/2" dia, 50" max	49.99
SPM-35 Hvy dty mag mt, cable, 45" max ....	39.99
SPM-NMO Hvy dty NMO mag mt, cbl, 45" max	44.99
<b>TRUNK LIP MOUNTING KITS</b>	
K-200KM Folding hchtrnk mt/coax; NR/SG ..D	\$ 39.99
K-400 Hatch/trunk mt; NR/SG antennas .....	39.99
K-400C Hatch/trunk mt w/coax; UHF mount ..	69.99
K-400CNMO Hatch/trunk mt w/coax; NMO mt	69.99
K-400S Hatch/trunk mt w/coax; UHF mt/SMA	79.99
K-400SNMO Hatch/trunk mt w/coax; NMO/SMA	79.99
K-400-3/8C Trunk mount w/6.5" cable; 3/4-24	69.99
K-412C Light duty hatchtrnk mt w/coax; UHF mt	59.99
K-412CNMO Light duty hatchtrnk mt w/coax; NMO	59.99
K-412S Light duty hatchtrnk mt w/coax; UHF/SMA	69.99
K-412SNMO Lt duty hatchtrnk mt/coax; NMO/SMA	69.99
K-110 10' extension cable for K-412 mts ..	14.99
K-600M Tilt angle SO-239 trunk mt w/cable ..	57.99
K-600S Tilt angle SO-239 trunk mt w/cable/SMA	57.99
K-601M SO-239 hideaway trunk mt, 6' coax ..	69.99
K-601NMO NMO hideaway trunk mt, 6' coax ..	69.99
C-110 10' extension cable for K-601 mts ..	14.99
K-604M 4" extension trunk mt w/flexible cable	57.99
K-9000LRM Motorized luggage rack mount ..	109.99
K-9000TM Motorized trunk/hatchback mt .....	109.99
<b>MIRROR &amp; LUGGAGE RACK MOUNTS &amp; KITS</b>	
K-515S Lug rack SO-239 mt; new type SUV/SMA	\$ 69.99
K-515SNMO Lug rack NMO mt; new type SUV/SMA	69.99
K-540 Mirror/luggage rack mt; under 45" .....	35.99
K-540KM Mirror/luggage rack mt w/coax .....	59.99
K-550* Luggage mt; new mini vans (use GLP)	44.99
K-550KM* Luggage mt w/SO-239 base/coax ..	69.99
*K-550 series not recommended for Yaesu ATAS-100	
<b>MOUNTING GROUP HARDWARE</b>	
C-101 SO-239 mt, 6.5' RG-316 low-loss coax	\$ 32.99
C-101NMO NMO mt, 6.5' RG-316 low-loss coax	32.99
C-104SMA 4' RG-58 ext cbl; SMA male & SO-239	16.99
C-105SMA 5' RG-58 ext cable; C-101/SMA male	16.99
C-110 10' ext cable; C-101/K-601/K-400-3/8C	14.99
C-110BNC 10' extension cable to BNC male ..	22.99
C-110SMA 10' RG-58 ext cable; C-101/SMA male	22.99
C-211 SO-239 mt, 6.5' coax, 10' coax extend	44.99
C-213 SO-239 mt, 13.5' RG-316 low-loss coax	41.99
C-213NMO NMO mt, 13.5' RG-316 low-loss coax	41.99
GLP-5N UHF mtg grp hrdwr; mini coax, Yae N D	1.99
NMO/UHF NMO to UHF adapter .....	12.99
NMO/UHF-B Black NMO to UHF adapter .....	13.99
<b>MULTIBAND HF BASE VERTICAL ANTENNA</b>	
CP-6A 75/40/20/15/10/6m 200w PEP 16' vert	\$299.99
<b>MONO-BAND BASE STATION ANTENNAS</b>	
A-144S5 2m 5 el 37.5' boom 9db beam .....	\$ 59.99
A-430S10 430 10 el 43" boom 13db beam ....	69.99
A-430S15 430 15 el 89" boom 14.8db beam ..	79.99
A-502HB 6m 2 el 2.6' boom 6.3db beam .....	99.99
A-504HB 6m 4 el 10.7' boom 10.8db beam ...	139.99
CP-22E 2m 6.5db 9' base antenna .....	54.99
DP-GH62 6m 6db 21' base antenna .....	139.99
F-22A 2m 6.7db 10.5' base antenna .....	99.99
F-23A 2m 7.8db 15' base antenna .....	119.99
F-23C1 148-154MHz 7.8db 15' comm base ..	169.99
F-718A 440 11.5db 15' type N base antenna	209.99
F-718L 420-430 11.5db ATV N base ant .....	169.99
G-200 2.4GHz 11db 6' N base antenna .....	199.99
2400-Y12 2.4GHz 12db 8el 15"bm 25w N beam	119.99
<b>DUAL-BAND BASE STATION ANTENNAS</b>	
U-200 440/1.2GHz 8.3/11.7db 6' N base ant	\$129.99
X-50A 2m/440 4.5/7.2db 5.6' base antenna ..	99.99
X-50NA 2m/440 4.5/7.2db 5.6' base N ant ...	99.99
X-200A 2m/440 6/8db 8.3' base antenna .....	139.99



## Diamond - continued

	AES Price
X-500HNA Hwy duty 2m/440 8.3/11.7db 17.8" ant	239.99
X-510MA 2m/440 8.3/11.7db 17.2" base ant	184.99
X-510NA 2m/440 8.3/11.7db 17.2" type N ant	184.99
X-700HA 2m/440 9.3/13db 24" type base ant	399.99
X-700HNA 2m/440 9.3/13db 24" type N ant	399.99

## TRI-BAND BASE STATION ANTENNAS

D-130J 25-130MHz 200w discone ant	\$ 89.99
V-2000A 52-54MHz/2m/440 2.1/6.2/8.4db 8.3"	162.99
X-3200A 2m/440/40 6/7.8/8db 10" base	209.99
X-6000A 2m/440/1.2 6.5/9.1/10db 10.5" N	189.99

## DUPLEXERS & TRIPLEXERS

MX-62M HF-6m & 2m/440, 12" cables dplx	\$ 74.99
MX-72D HF-2m/440 400/150/100w duplexer	43.99
MX-72H HF-2m/440 duplexer w/12" cables	46.99
MX-72N HF-2m/440 dplx, 440 type N, 12" cables	49.99
MX-214D 2m/220 150/100w dplx, no cables	69.99
MX-324 2m/220/440 triplexer	99.99
MX-324D 2m/220/440 triplexer, no cables	99.99
MX-610 HF-6m duplexer; IC-706/FT-100	69.99
MX-2000 HF-6m/2m/440 400/400/250w triplexer	84.99
MX-3000 HF-2m/440/1.2 400/200/100w triplexer	79.99
MX-3000N HF-2m/440/1.2 400/200/100w triplexer	85.99

## ACCESSORIES

CA-23RS DC-2500MHz 200w N lightning protect	\$ 39.99
CA-23RW 2500MHz 200w N waterproof protect	44.99
CA-35R/RS DC-500MHz 400w lightning protect	29.99
CX-210A 1.5kw DC-1000MHz coax switch	44.99
CX-210N 1.5kw DC-1500MHz N coax switch	74.99
CX-310A HD 3-pos DC-800MHz coax switch	83.99
DL-30A 15/100w peak 0-500MHz dummy load	27.99
DL-30N 15/100w peak 0-500MHz N dummy load	39.99
G2V-4000 Variable 40A switching ps/meter/spkr	179.99

## DRAKE (DRA)

R-8B Shortwave receiver	1499.99
MS-8 1592 Speaker	59.99
1590 35-55, 108-174 MHz VHF converter	269.99
7852 R-8B technical manual	39.99
1334 Mobile mount kit for SW-1/SW-2	.99
1591 Interface computer soft; original R-8	.99

## ECG (ECG)

U-105 Light duty antenna rotor/3-wire	\$ 69.99
TB-105 Thrust bearing	18.99

## EASY-UP (UPS OK) (EAS)

EZ 29-24S Stainless double strap chimney mt	\$ 17.99
EZ 48-3ABX 3' boxed tripod w/pitch pad kit	24.99
EZ 48-5ABX 5' boxed tripod w/pitch pad kit	34.99
EZ-516 5' 16 ga steel mast	7.99

## EMERSON (EME)

EVO-6550 2nd 900MHz camera; EVO-6500 D	\$ 29.99
PDC-803/PMD-8030 Dig compass/LCD backlite	29.99
RP-005 6-func flashing safety strobe/reflector	6.99

## GE (GEX)

72887 Super Radio III AM/FM radio, AC/DC	\$ 49.99
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## GAP VERTICALS (GAP)

DX-VIII Challenger 75°/40/20/15/12/10/6/2m 31.5'	\$299.99
*80m CW w/capacitor exchange from GAP	
Challenger Counterpoise	30.99
(SYN) 100' 1/4" black double braided rope	6.99
DX-VI Eagle 40/20/17/15/12/10m 21.5' rigid	309.99
DX-IV Voyager 160/80/40/20m 45'; use 350' guy	419.99
Voyager Counterpoise	55.99
(SYN) 350' 3/4" black double braided rope	39.99
Titan DX 75°/40/30/20/17/15/12/10m, 25'	339.99
*80m CW w/capacitor exchange from GAP	
100' Guy Kit with clamp	14.99
200' Guy Kit with clamp	22.99
Ground Mount Quick tilt mt for vertical ant	79.99

## Gap - continued

Ladder Mount Quick tilt mt; campers/RVs	79.99
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Hear It DSP noise eliminating speaker	159.99
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In Line Module Hear It in line module noise elim	199.99
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## GARMIN (GAR)

Geko-101 Small GPS receiver	\$ 99.99
Geko-201 Small GPS receiver w/WAAS	139.99
GPS-12XL GPS receiver	219.99
GPS-72 Handheld track-plotter GPS	159.99
GPS-III Plus Handheld/dash mt mapping GPS	299.99
GA-26C Low prof rem ant/cbl; GPSIII/III Plus	89.99
GA-27C Low prof rem ant/cbl; GPS-12C/XL	89.99
010-10048-00 Mounting bracket; 12C/XL	29.99
010-10082-00 Power/data cable	27.99
010-10085-00 Cig lighter adapter cable	23.99
010-10111-00 Mtg bkt; GPS-III Plus	31.99
010-10117-01 Caring case	6.99
010-10117-02 Caring case	12.99
010-10121-00 MCX-BNC adapt cbl; 12C/XL	25.99
010-10141-00 PC interface cable	38.99
010-10165-00 PC cable w/cig adapter	45.99
010-10215-00 MapSource US road&rec CD	99.99
StreetPilot 12 ch dash mt mapping GPS	399.99
GA-26C Low prof remote ant w/cable/BNC	89.99
010-10082-00 Power/data cable	27.99
010-10085-00 Cig lighter adapter	23.99
010-10141-00 PC interface cable	38.99
010-10165-00 PC cable w/cig adapter	45.99
010-10199-03 Caring case	4.99
010-10215-00 MapSource US road&rec CD	99.99
010-10215-03 MapSource MetroGuide CD D	99.99
010-10227-00 Blank 8MB memory cartridge	58.99
010-10232-00 Caring case	6.99
010-10468-00 MapSource MetroGuide CD	99.99
StreetPilot III Deluxe GPS	699.99
GA-26C Low prof remote ant w/cable/BNC	89.99
010-10141-00 PC interface cable	38.99
010-10165-00 PC cable w/cig adapter	45.99
010-10227-00 Blank 8MB memory cartridge	58.99

eMAP Deluxe GPS/mapping/8MB datacard/PC cbl	209.99
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GA-27C Low profile remote ant/cable/MCX	89.99
010-10121-00 MCX to BNC adapter cable	25.99
010-10203-00 Cig lighter cbl; eMAP & eTrex	39.99
010-10205-00 Data cable; eMAP & eTrex	22.99
010-10206-00 PC interface cbl; eMAP & eTrex	38.99
010-10215-00 MapSource US road&rec CD	99.99
010-10215-03 MapSource MetroGuide CD D	99.99
010-10227-00 Blank 8MB memory cartridge	58.99
010-10468-00 MapSource MetroGuide CD	99.99
eTrex 12 ch mini GPS receiver	119.99
eTrex Summit 12ch mini GPS/compass/barometric	199.99
010-10203-00 Cig lighter cbl; eMAP & eTrex	39.99
010-10205-00 Data cable; eMAP & eTrex	22.99
010-10206-00 PC interface cbl; eMAP & eTrex	38.99

NavTalk Analog cellular phone/GPS combo D	199.99
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010-10215-00 MapSource US road&rec CD	99.99
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GPS-V Deluxe Turn-by-turn navigation GPS/soft	399.99
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GA-26C Low prof remote ant w/cable/BNC	89.99
010-10082-00 Power/data cable	27.99
010-10111-00 Mounting bracket	31.99
010-10117-01 Caring case	6.99
010-10117-02 Caring case	12.99
010-10165-00 PC cable w/cig adapter	45.99
010-10215-03 MapSource MetroGuide CD D	99.99
010-10468-00 MapSource MetroGuide CD	99.99
Forerunner 201 GPS/personal training device	149.99
iQue-3600 Handheld PDA w/integrated GPS	549.99
Rino-120 GPS/FRS/GMRS w/8mb mem/basemap	249.99
010-10117-02 Caring case; Rino-120	12.99

## GEOCHRON (GEO)

World Watch Day/night Windows software	\$ 49.99
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## Geochron - continued

Std Bk/Gold* Std black/gold trim world clock/map	999.99
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\$100 rebate from Geochron 11/1/03 thru 12/31/03!	
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Std Oak/Gold* Std oak/gold trim world clock/map	999.99
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\$100 rebate from Geochron 11/1/03 thru 12/31/03!	
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\*These items are drop-shipped (shipped direct to you from the Geochron factory). On factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Redwood City, California via UPS. COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on this special order item. Other Geochron models available on special order.

## GLEN MARTIN (GME)

### TOWERS

M-1330A 30' alum tower package w/Hazer T	1614.99
M-1340A 40' alum tower package w/Hazer T	1831.99
M-1350A 50' alum tower package w/Hazer T	2069.99
M-1840A 40' alum tower package w/Hazer T	2149.99
M-1850A 50' alum tower package w/Hazer T	2409.99
M-1860A 60' alum twr pack w/Voyager Hazer T	3355.99
M-1870A 70' alum twr pack w/Voyager Hazer T	3659.99
ML-1800 Messenger line kit for GME towers	72.99
KB-1000 57" side arm; M-13 series	81.99
KB-1300 57" side arm; M-18 series	84.99
M-22 10' galv steel M-22 tower section	431.99
CHB-22 Footing assembly for M-22	260.99
B-22 Leveling base for M-22	379.99

### ROOF-TOP TOWERS

RT-424 4.5' roof-top tower, anodized aluminum	\$163.99
RT-832 8' roof-top tower, anodized aluminum	242.99
RT-936 9' roof-top tower, anodized aluminum	396.99
RT-1832 17.5' roof-top tower, anodized aluminum	531.99
RT-2632 26' roof-top tower, anodized aluminum	879.99
MC-10 Mast clamp; aluminum, 2 required	24.99
TB-25 Premium thrust bearing	89.99
LB-3755 Lag bolts, set of 8 3/4 x 5"	9.99
EL-3744 Concrete L-bolts, set of 8	14.99
RA-6024 24" side arm for roof towers	41.99
RA-6048 48" side arm for roof towers	54.99

### HAZERS FOR ROHN TOWERS

H-2 Heavy duty aluminum Hazer system	\$360.99
H-3 Standard duty aluminum Hazer system	273.99
H-4 Heavy duty galv steel Hazer system	348.99
BW-8001 Roller winch for H-2/3/4	80.99
HR-2040 Rohn bearing set for Hazers	64.99
HR-6010 TFX plates for H-2/3/4/5	26.99
HS-1301 Side arm for Hazers	64.99
ML-2500 Messenger line kit for Rohn towers	76.99
VH8-60 Voyager Hazer for 60' Rohn 45G	1409.99
VH8-70 Voyager Hazer for 70' Rohn 45G	1544.99
VH9-50 Voyager Hazer for 50' Rohn 55G	1329.99
VH9-60 Voyager Hazer for 60' Rohn 55G	1449.99
VH9-70 Voyager Hazer for 70' Rohn 55G	1564.99

### LIGHTNING PROTECTION

LR-8400 Premium lightning rod kit	\$ 99.99
GR-4400 Ground rod wire clamp	6.99
GR-5080 8' x 3/8" ground rod	20.99
TL-0470 Terminal lug	2.99
LR-8418 Lightning rod point, 18" long	38.99
LR-8452 Clamp for holding rod to 2" mast	25.99
LR-8451 Clamp for holding rod to 1 1/2" mast	24.99
CW-2540 25' #4 bare copper ground wire	20.99
CW-5040 50' #4 bare copper ground wire	41.99
CW-7540 75' #4 bare copper ground wire	59.99
CW-1040 100' #4 bare copper ground wire	66.99
CW-1240 125' #4 bare copper ground wire	98.99
CW-1540 150' #4 bare copper ground wire	118.99



Glen Martin - continued AES Price		Glen Martin - continued AES Price		Heil - continued AES Price	
<b>GUYING</b>		<b>FP-2915</b> 1"x5" web lanyard, 3/4" & 1/2" throat openings		<b>HS-1</b> Hand switch	
HP-3000	Kevlar guy cable, 3000# break strength per ft.	64.99		HS-4	DX'ers 'dream machine' mic element
HP-4500	Kevlar guy cable, 4500# break strength per ft.	1.49		HC-5	Key microphone element
HP-7500	Kevlar guy cable, 7500# break strength per ft.	1.99		AD-100	Mic/boomset adapt; FT-100/AD-1Y/CC-1Y
WR-125	1/2" galv 7 x 7 guy cable	.49		ADM-Y817	Mic/boomset adapt; FT817/AD1Y/CC1Y
WR-380	3/4" galv 7 x 7 guy cable	.69		HMP-M	In-line mic pre/mod plug; 706/MkII
WRS-156	3/8" stainless 7 x 19 guy cable per ft.	.79		GM-4	Goldline dual element studio mic w/HC-4
WRS-187	3/8" stainless 7 x 19 guy cable per ft.	.89		GM-5	Goldline dual element studio mic w/HC-5
WRS-250	1/2" stainless 7 x 19 guy cable per ft.	.99		GM-V	Goldline vintage studio mic/matching xfmr
WR-1862	1/2" U-bolt clip (also for Kevlar 3000/4500)	1.69		HCL-4	Classic 1930's desk mic/studio el & HC-4
WR-2565	1/2" U-bolt clip (also for Kevlar 7500)	1.69		HCL-5	Classic 1930's desk mic/studio el & HC-5
SP-3164	3/8" U-bolt clip	1.99		HM-10-4	Microphone with HC-4 element
PT-2500	3/4" heavy duty thimble (for all Kevlar)	2.69		HM-10-5	Microphone with HC-5 element
PT-3100	3/4" heavy duty thimble	2.99		HM-10-Dual	Mic w/HC-4 & HC-5 elements
PT-3700	3/4" heavy duty thimble	3.39		HM-1	Studio condenser microphone; lcom
H-165	1/2" end cap (for Kevlar 3000/4500)	.79		ICM	Pre-PRO lcom electret mic w/cable
H-164	3/4" end cap (for Kevlar 7500)	.89		CC-1-C	3/4" plug cable for Collins/Drake
H-142	3/8" end cap	.99		CC-1-D	4-pin cable for Drake
RG-4010	3/8" link connecting earthscrew to turnbuckle	8.99		CC-1-I	8-pin cable for lcom
ES-40	4" dia x 30" earth screw	22.99		CC-1-I-M	Modular cable for lcom
EG-40	4" dia x 30" galvanized earth screw	33.99		CC-1-K	8-pin cable for Kenwood
ES-60	6" dia x 48" earth screw	39.99		CC-1-K-M	Modular cable for Kenwood
EG-60	6" dia x 48" galvanized earth screw	55.99		CC-1-T	Cable for Ten-Tec
ES-80	8" dia x 66" earth screw	68.99		CC-1-Y	8-pin cable for Yaesu
TB-3806	3/4" x 6" galvanized turnbuckle	18.99		CC-1-Y-M	Modular cable for Yaesu
TB-5009	1/2" x 9" galvanized turnbuckle	24.99		HSTA-706	Adapt; HM-I - lcom 706/modular plug
TB-6212	3/4" x 12" galvanized turnbuckle	41.99		PL-2	Proline boom
<b>MASTS</b>		<b>VS-2</b> Emergency vehicle siren		PL-2T	Topless proline boom
M-1049	9' x 2" OD heavy duty galv steel mast	\$ 79.99		SB-1	Small adjustable mic boom w/C clamp
M-1040	10' x 2" OD heavy duty galv steel mast	84.99		TB-1	Table base microphone stand
MA-1040	10' x 1.92" OD medium duty alum mast	94.99		HMM-IC	Condenser hand mic/8-pin plug; lcom
MA-1049	9' x 1.92" OD medium duty alum mast	89.99		HMM-K	Dual el hand mic/HC-4/8-pin plug; Ken
MA-1069	9' x 2.375" OD heavy duty alum mast	99.99		HMM-Y	Dual el hand mic/HC-4/8-pin plug; Yae
MA-1050	5' x 1.92" OD medium duty alum mast	61.99		HQP	Quiet Phone Noise cancelling headphones
MA-5050	5' x 1.31" OD light duty alum mast	41.99		Boom Clip	for BM-series
MP-1409	9' x 2" OD .250 wall extra HD fg mast	129.99		Ear Pads	for BM-series
MP-1809	9' x 2" OD .125 wall med dty fg mast	76.99		Ear Pads	for PRO-series
<b>SIDE ARMS</b>		<b>VS-2</b> ALS/A Window mt siren/amber halogen		Ham Radio Handbook	
HS-2500	36" universal side arm mount	\$ 65.99		CB-1	Classic base
HS-6000	52" universal side arm mount	78.99		HD-AT	6db headph attenuator, 1/2" m-1/8" f adapt
<b>WINCHES</b>		<b>VS-2LS/B</b> Window mt siren/blue halogen		SM-1	Shock mount for any microphone boom
B-800	800 lb capacity w/4.5:1 gear ratio	\$ 72.99		TM-1	Tri-mount microphone adapter
W-1100	1100 lb capacity w/3.9:1 gear ratio	42.99		XT-1	Audio matching xfmr; lo-Z mic/tube Xcvr
B-2000	2000 lb capacity w/17:1 gear ratio	126.99		<b>HIGH SIERRA (HIS)</b>	
WA-1200	4000 lb electric winch, 115 vac	489.99		Platinum Pack	Black HS-1800/Pro w/install kit
WD-1200	4000 lb electric winch, 12 vdc	448.99		HS-120	Capacity hat
W-6371	Pendant for 115 vac	178.99		HS-202CL	2" rcvr lay back adapter; univ mtg bkt
W-6372	Pendant for 12 vdc	102.99		HS-214CL	1 1/2" rcvr lay back adapt; univ mtg bkt
<b>TOWER CLIMBING EQUIPMENT</b>		<b>VS-2LS/R</b> Window mt siren/red halogen		<b>HobbyZone (HBZ)</b>	
FP-5600	2 d-ring full body climbing harness (S-M)	\$ 89.99		1500	Firebird II RTF electric airplane
FP-5601	2 d-ring full body climbing harness (L-XL)	89.99		2500	Firebird Commander RTF electric airplane
FP-5602	4 d-ring full body climbing harness (S-M)	106.99		3305	Zig Zag Racer RTR electric boat
FP-5603	4 d-ring full body climbing harness (L-XL)	106.99		3500	Aerobird Challenger RTF electric airplane
FP-6600	6 d-ring full body climbing harness (XS)	260.99		4000	Fighterbird RTF electric airplane
FP-6601	6 d-ring full body climbing harness (S)	236.99		7800	Sky Surfer RTF electric airplane
FP-6602	6 d-ring full body climbing harness (M)	236.99		4025F	Stealth target w/comb module/FTB
FP-6603	6 d-ring full body climbing harness (L)	236.99		<b>HUSTLER (HUS)</b>	
FP-6604	6 d-ring full body climbing harness (XL)	236.99		RM-80	80m CW 400w PEP resonator
FP-7600	AeroClimber 6 d-ring saddle harness (XS)	231.99		RM-75	75m phone 400w PEP resonator
FP-7601	AeroClimber 6 d-ring saddle harness (S)	209.99		RM-60	60m phone resonator
FP-7602	AeroClimber 6 d-ring saddle harness (M)	209.99		RM-40	40m 400w PEP resonator
FP-7603	AeroClimber 6 d-ring saddle harness (L)	209.99		RM-30	30m 400w PEP resonator
FP-7604	AeroClimber 6 d-ring saddle harness (XL)	209.99		RM-20	20m 400w PEP resonator
FP-2606	1"x6" web lanyard/dbl locking snaphooks	32.99		RM-17	17m 400w PEP resonator
FP-2903	1"x3" web lanyard, 3/4" throat, snaphooks	38.99		RM-15	15m 400w PEP resonator
FP-2904	1"x4" web lanyard, 3/4" throat, snaphooks	39.99		RM-12	12m 400w PEP resonator
FP-2905	1"x5" web lanyard, 3/4" throat, snaphooks	39.99		RM-11	CB 400w PEP resonator
FP-2906	1"x6" web lanyard, 3/4" throat, snaphooks	40.99		RM-10	10m 400w PEP resonator
FP-2913	1"x3" web lanyard, 3/4" & 1/2" throat openings	63.99			
FP-2914	1"x4" web lanyard, 3/4" & 1/2" throat openings	64.99			



<b>Hustler - continued</b>	<b>AES Price</b>
RM-80S 80m CW 2kw PEP resonator .....	49.99
RM-75S 75m phone 2kw PEP resonator .....	49.99
RM-40S 40m 2kw PEP resonator .....	35.99
RM-20S 20m 2kw PEP resonator .....	28.99
RM-15S 15m 2kw PEP resonator .....	24.99
RM-11S CB 2kw PEP resonator .....	23.99
RM-10S 10m 2kw PEP resonator .....	23.99
MO-1 54" mast for fender or deck mount .....	31.99
MO-2 54" mast for bumper mount .....	31.99
MO-3 54" mast no break-over mast .....	23.99
MO-4 22" mast for special applications .....	19.99
VP-1 Tri-band adapter .....	5.99
RSS-2 Resonator spring .....	9.99
QD-2 Stainless quick disconnect .....	19.99
L-14-144 12' RG-58, PL-259 to lugs .....	9.99
L-14-240 20' RG-58, PL-259 to lugs .....	12.99

### STAINLESS 2" MOBILE BALL MOUNTS

SSM-1 Ball & spring, cadmium hardware .....	\$ 46.99
SSM-2 Ball, cadmium hardware .....	26.99
SSM-3 Stainless steel spring .....	24.99

### 1-1/2" MOBILE BALL MOUNTS

C-32 Chrome plated ball .....	\$ 11.99
C-30 Chrome plated spring .....	11.99
C-29 Stainless steel spring .....	17.99
BM-1 Single strap bumper mt w/C-32 .....	21.99

### 3/8-24 THREAD MOBILE MOUNTS

HLM Trunk lip mount w/swivel .....	\$ 22.99
HOT Hustloff trunk lip mt w/swivel .....	23.99
MBM Super magnet mount w/16' coax .....	19.99
RVM Recreational vehicle mount .....	20.99
TLM Trunk lip mount .....	21.99

### HF ANTENNAS

4-BTV 40/20/15/10m 21' trap vertical .....	\$119.99
5-BTV 80/40/20/15/10m 25' trap vertical .....	149.99
30-MTK 30m trap kit for 4-BTV/5-BTV .....	41.99
6-BTV 80/40/30/20/15/10m 24' trap vert .....	179.99

### VHF/UHF BASE STATION ANTENNAS

G3-144 2m 3db 7.5' vertical antenna .....	\$ 63.99
G6-144B 2m 6db 10' vertical antenna .....	114.99
G6-270R 2m/440 6db 7.6' base station ant .....	159.99
G7-144 2m 7db 15' vertical antenna .....	159.99
G7-220 220 MHz 7db 10' vertical antenna .....	149.99
G6-440 440 MHz 6db 7' vertical antenna .....	139.99

### VHF/UHF MOBILE ANTENNAS

BBG-144 2m 3.4db NMO coil/whip only .....	\$ 39.99
BGGT-144 2m 3.4db NMO trunk lip mt ant .....	49.99
BBG-440-5 440 5db NMO coil/whip only .....	39.99
BGGT-440-5 440 5db NMO trunk lip mt ant .....	49.99
BBL-144A 2m 3/4" hole mt antenna, 3.4db .....	39.99
BBLT-144A 2m trunk lip mt ant, 3.4db .....	47.99
CG-144 2m 3/4-24 ant, 7' high, 5.2db .....	31.99
CGT-144 2m trunk mt ant, 7' high, 5.2db .....	51.99
CG-220 220 MHz 3/4-24 ant, 5.2db .....	29.99
CGT-220 220 MHz 5.2db tnk mt ant .....	39.99
LMB-144 2m 3.4db black NMO coil/whip only .....	22.99
LMB-440-5 440 5db black NMO trunk lip mt .....	19.99
LMC-144 2m 3.4db NMO coil/whip only .....	19.99
LMC-270 2m/440 2.4/4db NMO coil/whip only .....	31.99
LMC-440-5 440 5db NMO coil/whip only .....	19.99
LMG-144 2m 3.4db NMO pushpin coil/whip only .....	25.99
LMG-440-5 440 5db NMO pushpin coil/whip only .....	19.99
MKR-2 Radial kit for CG/RX/SF-antennas .....	20.99
MX-2 2m 3db black & chrome NMO mag mt ant .....	34.99
MX-2B 2m 3db all black NMO mag mt ant .....	39.99
MX-220 220 3db blk & chrome NMO mag mt ant .....	34.99
MX-270 2m/440 2.4/4db chrome NMO mag mt ant .....	59.99
MX-440 440 5db blk & chrome NMO mag mt ant .....	36.99
MX-440B 440 5db all black NMO mag mt ant .....	36.99
RX-2 2m 3.4db magnetic mount ant .....	24.99
RX-220 220 3.4db magnetic mt antenna .....	24.99

<b>Hustler - continued</b>	<b>AES Price</b>
RX-440 440 5db magnetic mt antenna .....	24.99
SF-2 2m 3/4-24 ant, 4' high, 3.4 db .....	14.99
SF-220 220 MHz 3/4-24 antenna, 3 db .....	14.99
THF 140-500 MHz 1/4 wave trunk mount ant .....	23.99
UGM 140-500 MHz 1/4 wave BNC mag mt ant .....	21.99
UHT-1 140-500 MHz 1/4 wave roof mt ant .....	14.99

### CB & MONITOR ANTENNAS

1C-11 White trunk mount CB antenna .....	\$ 13.99
1C-11B Black trunk mt CB antenna .....	13.99
1C-100 White magnetic mount CB antenna .....	19.99
1C-100B Black magnetic mt CB antenna .....	19.99
DTG 25" fg double-talk gutter mt CB ant .....	39.99
FG-27S 48" CB whip .....	11.99
HQ-27 Power Packer 3/4-24 CB whip .....	17.99
HQ-27M Power Packer trunk mt CB antenna .....	36.99
HQD Dual fg mirror mount CB antenna .....	49.99
HQT Single fg mirror mount CB antenna .....	27.99
HTM-1 Twin Husky fg ant w/mirror mts .....	14.99
RQM Magnetic mount CB antenna .....	19.99
RGT-27L 25" CB antenna w/rain gutter mt .....	26.99
RTM 25" magnetic mount CB antenna .....	16.99
RTS-27L 25" CB antenna w/roof mount .....	26.99
SCB/BLK 46" black CB whip .....	29.99
SCB/BLU 46" blue CB whip .....	29.99
SCB/RED 46" red CB whip .....	29.99
SCB/WHT 46" white CB whip .....	29.99
SCB-S/BLK 35" black CB whip .....	29.99
SCB-S/BLU 35" blue CB whip .....	29.99
SCB-S/RED 35" red CB whip .....	29.99
SCB-S/WHT 35" white CB whip .....	29.99
DCL-B Discone monitor ant/50' coax/BNC plug .....	34.99
DCX Discone monitor ant, 40-700 MHz .....	23.99
MOR-B Roof/deck mt tri-band BNC monitor ant .....	18.99
MOT Trunk lip mt tri-band Motorola plug mon ant .....	12.99
MOT-B Trunk lip mt tri-band BNC monitor ant .....	19.99
MRM-B Magnet mt tri-band BNC monitor ant .....	19.99

### HY-GAIN (HYG)

190S RRR-88 Roof radial kit .....	\$ 19.99
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### HF BEAM ANTENNAS

LI-103BA 3el 7.9db 8' boom 10m beam .....	\$159.99
LI-105CA 5el 10.8db 24' boom 10m beam .....	289.99
LI-153BA 3el 7.9db 12' boom 15m beam .....	209.99
LI-204BA 4el 8.2db 26' boom 20 or 17m beam .....	539.99
TH-3JRS 3el 600w PEP 20/15/10m beam .....	359.99
TH-3MK4 3el 8db 14' boom 20/15/10m beam .....	469.99
TH-5MK2 5el 8.3db 19' boom 20/15/10m beam .....	699.99
TH-7DX 7el 8.77db 24' boom 20/15/10m beam .....	799.99
BN-86 3-30MHz balun for HF beam .....	79.99

### MULTI-BAND HF VERTICAL ANTENNAS

AV-14AVQ 40/20/15/10m 18' vertical ant .....	\$169.99
AV-18HT HyTower 80/40/20/15/10m 53' vert T* .....	799.99
AV-62D 20/17/15/12/10/6m 22.5' vertical .....	269.99
AV-64D 40/30/20/17/15/12/10/6m 25.5' vert .....	359.99
DX-88 160/40/30/20/17/15/12/10m 25' vert .....	369.99

\*AV-18HT is drop-shipped (shipped direct to you from the Hy-Gain factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Starkville, Mississippi via truck. COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order items.

### VHF/UHF ANTENNAS

DB-218SAT VHF/UHF Oscar Link system .....	\$529.99
VB-25FM 5el 11.2db 75' boom 2m beam .....	59.99
VB-64DX 4el 10.4db 12' boom 6m beam .....	144.99

### ANTENNA ROTORS

AR-40 3 sq ft antenna rotor/5-wire .....	\$269.99
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<b>Hy-Gain - continued</b>	<b>AES Price</b>
CD-45-II 8.5 sq ft antenna rotor/8-wire .....	369.99
HAM-IV 15 sq ft antenna rotor/8-wire .....	529.99
HAM-V Digital 15 sq ft antenna rotor/8-wire .....	899.99
HDR-300A Hwy duty dig 25 sq ft rotor/8-wire .....	129.99
T-2X Tailtwister 20 sq ft antenna rotor/8-wire .....	619.99
T-2XD Tailtwister dig 20 sq ft ant rotor/8-wire .....	979.99

### OPTIONAL ACCESSORIES FOR ROTORS

DCU-1 Dig rotor control; CD-45/HAM-IV/T-2X .....	\$599.99
MSHD Lwr mast support; HAM-IV/T-2X/XD .....	99.99
MLD Lower mast support; CD-45-II/AR-40 .....	39.99
TSP-1 Tower spacer plate .....	34.99

### See BELDEN for rotor cable

### iBOTZ (IBO)

MR-1001 Soundtracker robot kit .....	\$ 29.99
MR-1002 Antoid robot kit .....	49.99

### ICC (ICC)

Nitelogger II Automatic tape recorder activator .....	\$ 69.99
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### ICOM (ICO)

FL-102 6 KHz 9 MHz IF AM filter; 7750DSP .....	\$ 79.99
MB-19 Rack mtg handles; IC-7750DSP .....	59.99
UT-66 Voice synthesizer; IC-7750DSP .....	69.99

### IC-756PRO II Xcvr/Rcvr/6m/1M-F/DSP/tuner/keyer \*\$2349.99

*Price w/instant coupon; coupon expires 12/31/03	
PS-125 ps FREE with IC-756PRO II thru 12/31/03	
(BET) I-Mate Msg acc; 746PRO/756PRO II .....	74.99
PS-125 25A switching power supply .....	299.99
AH-4 80-6m 120w auto wire ant tuner .....	259.99
AH-2B Whip w/mt; 40-6m use tuner .....	299.99
AH-2B extra whip only .....	119.99
CT-17 CI-V level converter .....	129.99
HM-36 Scanning hand mic .....	74.99
OPC-025D Extra DC cable .....	29.99
SM-6 Desk microphone .....	99.99
SM-20 Deluxe desk microphone .....	199.99
SP-20 Speaker w/audio filter .....	239.99
SP-21 External speaker .....	119.99
UT-102 Voice synthesizer .....	74.99
RS-746 Win remote control software; IC-746.D .....	69.99

### IC-746PRO Xcvr/Rcvr/6m/2M/F-DSP/tuner/mic \*\$1399.99

*Price w/instant coupon; coupon expires 12/31/03	
PS-125 ps FREE with IC-746PRO! thru 12/31/03	
(BET) I-Mate Msg acc; 746PRO/756PRO II .....	74.99
PS-125 25A switching power supply .....	299.99
AH-4 80-6m 120w auto wire ant tuner .....	259.99
AH-2B Whip w/mt; 40-6m use tuner .....	299.99
AH-2B extra whip only .....	119.99
CR-338 High stability crystal unit .....	81.99
CT-17 CI-V level converter .....	129.99
OPC-025D Extra DC cable .....	29.99
SM-6 Desk microphone .....	99.99
SM-20 Deluxe desk microphone .....	199.99
SP-20 Speaker w/audio filter .....	239.99
SP-21 External speaker .....	119.99
UT-102 Voice synthesizer .....	74.99
UT-30 Tone encoder; IC-707 .....	49.99

### IC-718 HF Xcvr/SW Rcvr/mic .....

UT-106 DSP FREE with IC-718! thru 12/31/03	
(BET) 706 Tune Control for IC-718 .....	32.99
PS-125 25A switching power supply .....	299.99
AH-4 80-6m 120w auto wire ant tuner .....	259.99
AH-2B Whip w/mt; 40-6m use tuner .....	299.99
AH-2B extra whip only .....	119.99
AT-180 Auto coax antenna tuner; HF+6m .....	369.99
OPC-598 23' extension cable for AT-180 .....	69.99
CR-338 High stability crystal unit .....	81.99
CT-17 CI-V level converter .....	129.99
FL-52A 500 Hz 455 KHz IF CW filter .....	179.99
FL-53A 250 Hz 455 KHz IF CW filter .....	179.99
FL-96 2.8 KHz 455 KHz IF SSB filter .....	139.99



## Icom - continued

## AES Price

FL-222 1.9 KHz 455 KHz IF SSB filter .....	199.99
FL-257 3.3 KHz 455 KHz IF SSB filter .....	189.99
Suggest dealer installation of filters in IC-718	
MB-5 Mobile mount .....	59.99
MB-23 Side mount carrying handle .....	15.99
OPC-0250 Extra DC cable .....	29.99
SM-6 Desk microphone .....	99.99
SM-20 Deluxe desk microphone .....	199.99
SP-7 Small external speaker .....	94.99
SP-20 Speaker w/audio filter .....	239.99
SP-21 External speaker .....	119.99
UT-102 Voice synthesizer .....	74.99
UT-106 Plug-in DSP .....	139.99
IC-703 10w mini HF Xcvr/50 ohm tuner/DSP	669.99
IC-703 Plus 10w mini HF+6m Xcvr/tuner/DSP	769.99
AH-4 80-6m 120w auto wire ant tuner .....	259.99
AH-2B Whip w/m/t; 40-6m use tuner .....	299.99
AH-2B extra whip only .....	119.99
CT-17 CI-V level converter .....	129.99
FL-52A 500 Hz 455 KHz IF CW filter .....	179.99
FL-53A 250 Hz 455 KHz IF CW filter .....	179.99
FL-222 1.9 KHz 455 KHz IF SSB filter .....	199.99
FL-257 3.3 KHz 455 KHz IF SSB filter .....	189.99
HM-118TN TTP microphone .....	59.99
LC-156 Back pack carrying case .....	89.99
MB-62 Mounting bracket for main unit .....	25.99
MB-63 Mounting bracket for control panel .....	18.99
MB-65 Mounting base platform .....	35.99
MB-72 Carrying handle .....	14.99
OPC-581 11.5' separation cable .....	60.99
OPC-587 16' separation cable .....	79.99
OPC-599 7+8-pin to 13-pin adapter .....	60.99
OPC-742 13-pin cable .....	59.99
RMK-706 Package; MB-62/MB-63/OPC-581	70.99
SM-6 Desk microphone .....	99.99
SM-20 Deluxe desk microphone .....	199.99
OPC-589 8-pin to jack adapt; SM-6/8/20	35.99
SP-7 Small external speaker .....	94.99
SP-10 Slim-line external speaker .....	69.99
UT-102 Voice synthesizer .....	74.99
IC-706 Mk II-G Mini Xcvr/Rcvr/5m/2m/440/DSP	799.99
RMK-706 FREE with IC-706 Mk II-G! thru 12/31/03	
(BET) 706 Tune Control for IC-706-series ...	32.99
PS-125 25A switching power supply .....	299.99
AH-4 80-6m 120w auto wire ant tuner .....	259.99
AH-2B Whip w/m/t; 40-6m use tuner .....	299.99
AH-2B extra whip only .....	119.99
AT-180 Auto coax antenna tuner; HF+6m ...	369.99
OPC-598 23' extension cable for AT-180 .....	69.99
CR-282 High stability crystal unit; Mk II G ..	149.99
Suggest dealer install; CR-282, IC-706 Mk II-G	
CT-17 CI-V level converter .....	129.99
FL-100 500 Hz 9 MHz IF CW filter .....	119.99
FL-101 250 Hz 9 MHz IF CW filter .....	119.99
FL-103 2.8 KHz 9 MHz IF SSB filter .....	109.99
FL-223 1.9 KHz 9 MHz IF SSB filter .....	89.99
FL-232 350 Hz 9 MHz IF CW/RTTY filter .....	89.99
HM-118TN TTP microphone .....	59.99
LC-156 Back pack carrying case .....	89.99
MB-62 Mounting bracket for main unit .....	25.99
MB-63 Mounting bracket for control panel .....	18.99
MB-65 Mounting base platform .....	35.99
MB-72 Carrying handle; Mk II-G only .....	14.99
OPC-0250 Extra DC cable .....	29.99
OPC-581 11.5' separation cable .....	60.99
OPC-587 16' separation cable .....	79.99
OPC-599 7+8-pin to 13-pin adapter .....	60.99
OPC-742 13-pin cable .....	59.99
RMK-706 Package; MB-62/MB-63/OPC-581	70.99
SM-6 Desk microphone .....	99.99
SM-20 Deluxe desk microphone .....	199.99

## Icom - continued

## AES Price

OPC-589 8-pin to jack adapt; SM-6/8/20	35.99
SP-7 Small external speaker .....	94.99
SP-10 Slim-line external speaker .....	69.99
UT-102 Voice synthesizer .....	74.99
AH-710 1.9-30 MHz 80' folded dipole/98' coax	269.99
PW-1 160-15+6m linear amplifier/ps/tuner	4699.99
OPC-137 Adapter cable; older Icom Xcvr .....	19.99
UT-86 Tone squelch; IC-706 Mk II only .....	69.99
RECEIVERS	
R-2-07* 5MHz-1.3GHz AM/FM hand Rcvr ..D	\$149.99
AD-92SMA SMA- BNC adapter .....	16.99
BC-127A Extra nicad charger .....	20.99
CS-R2 DOS programming software .....	4.99
OPC-474 Cloning cable (R-2 to R-2) .....	18.99
OPC-478 PC RS-232C cable .....	45.99
CSW-HHRX Win prog soft/cable; R-2/R-10	50.99
HP-4 Lightweight headphones .....	29.99
SP-13 Earphone .....	4.99
R-5-06 15M-1.3G AM/FM hand/batts/cgr/cell bkld	199.99
R-5-11* 5MHz-1.3GHz AM/FM hand Rcvr ...	199.99
AD-92SMA SMA- BNC adapter .....	16.99
CP-18A Cig lighter cable .....	30.99
CS-R5 Win programming software .....	40.99
OPC-474 Cloning cable (R-5 to R-5) .....	18.99
OPC-478 PC RS-232C cable .....	45.99
OPC-478U PC USB cable .....	60.99
HP-4 Lightweight headphones .....	29.99
LC-146A Carrying case .....	24.99
R-3-26 5M-2.45G AM/FM/TV hand Rcvr/cell bkld	339.99
R-3-27* 5MHz-2.45GHz AM/FM/TV hand Rcvr	489.99
BC-135 Desktop charger w/adaptor cup ...	80.99
BP-206 Extra 3.7v 1650mah lith ion batt ..	63.99
CP-18A Cig lighter cable .....	30.99
CS-R3 Win programming software .....	24.99
OPC-474 Cloning cable (R-3 to R-3) .....	18.99
OPC-478 PC RS-232C cable .....	45.99
OPC-478U PC USB cable .....	60.99
HP-4 Lightweight headphones .....	29.99
LC-151 Carrying case .....	24.99
SP-13 Earphone .....	4.99
R-10-05 5M-1.3G AM/FM/SSB hand/cell bkld	299.99
R-10-15* 5MHz-1.3GHz AM/FM/SSB HH Rcvr	299.99
CP-12L Right angle cig cable w/filter .....	36.99
CS-R10 DOS programming software; R-10	13.99
OPC-474 Cloning cable (R-10 to R-10) ..	18.99
OPC-478 PC RS-232C cable .....	45.99
CSW-HHRX Win prog soft/cable; R-10/R-2	50.99
CT-17 CI-V level converter .....	149.99
HP-4 Lightweight headphones .....	29.99
LC-140 Carrying case for R-10 .....	38.99
OPC-254L Right angle mini DC pwr cable ..	14.99
SP-13 Earphone .....	4.99
PCR-1000-08* .01-1300 PC controlled Rcvr ..D	199.99
BON CS-40 Bonito soft; PCR-1000-02/07 ..	68.99
PCR-1000-02 BON PC Rcvr/Bon soft/cell bkld	374.99
PCR-1000-07 BON* PC Rcvr/Bonito soft ..	374.99
AH-7000 25-1000 MHz discone ant w/coax	169.99
OPC-131 DC power cord .....	13.99
SP-7 Small external speaker .....	94.99
SP-10 Slim-line external speaker .....	69.99
UT-106 Plug-in DSP unit .....	139.99
R-75 .03-60 MHz shortwave receiver .....	599.99
UT-106 DSP FREE with R-75! thru 12/31/03	
CR-282 High stability crystal unit .....	149.99
CT-17 CI-V level converter .....	129.99
FL-52A 500 Hz 455 KHz IF CW filter .....	179.99
FL-53A 250 Hz 455 KHz IF CW filter .....	179.99
FL-96 2.8 KHz 455 KHz IF SSB filter .....	139.99
FL-100 500 Hz 9 MHz IF CW filter .....	119.99
FL-101 250 Hz 9 MHz IF CW filter .....	119.99
FL-103 2.8 KHz 9 MHz IF SSB filter .....	109.99

## Icom - continued

## AES Price

FL-222 1.9 KHz 455 KHz IF SSB filter .....	199.99
FL-223 1.9 KHz 9 MHz IF SSB filter .....	89.99
FL-232 350 Hz 9 MHz IF CW/RTTY filter .....	89.99
FL-257 3.3 KHz 455 KHz IF SSB filter .....	189.99
MB-5 Mobile mount .....	59.99
MB-23 Side mount carrying handle .....	15.99
OPC-869 DC cable .....	13.99
RS-R75 PC control software w/RS-232 cable	80.99
SP-21 External speaker .....	119.99
UT-102 Voice synthesizer .....	74.99
UT-106 Plug-in DSP unit .....	139.99
R-8500-02 .1M - 2G receiver/cell blocked	1399.99
R-8500-04* .1MHz - 2GHz receiver .....	1499.99
AH-7000 25-1000 MHz discone ant w/coax	169.99
CR-293 High stability xtal unit .....	279.99
FL-52A 500 Hz CW filter .....	179.99
MB-12 Mobile mount .....	49.99
MB-23 Side mount carrying handle .....	15.99
RS-R8500 PC control soft w/RS-232 cable	80.99
SP-7 Small external speaker .....	94.99
SP-21 External speaker .....	119.99
UT-102 Voice synthesizer .....	74.99

\*United States & state government agencies or a political subdivision thereof and communications utility companies and their legal agents **ONLY** may purchase unblocked models of R-2/R-3/R-5/R-10/PCR-100/PCR-1000/R-8500 for official government or communications utility company use only. Mail or FAX purchase order to AES. Exports: inquire.

## 2m TRANSCEIVERS

UT-101 DTMF unit for IC-2000H .....	\$ 28.99
IC-2100H-25N 50w 2m FM Xcvr/NEW TTP mic	169.99
CS-2100 DOS cloning software .....	13.99
OPC-478 PC RS-232C cable .....	45.99
CSW-2100 Win prog soft/cable; IC-2100H ...	50.99
HM-90A Wireless microphone .....	119.99
BC-96 Wireless microphone holder .....	29.99
EX-1759 Infrared receiver .....	99.99
HM-133S Extra TTP mic; 2100H/2100H25N	90.99
MB-17A Quick release bracket .....	49.99
MB-28H Extra mobile bracket .....	26.99
OPC-346 Extra 9.8' DC cable .....	28.99
OPC-347 23' DC cable .....	46.99
OPC-440 16.4' mic extension cable .....	85.99
OPC-441 16.4' speaker extension cable ...	33.99
OPC-474 Radio to radio cloning cable .....	18.99
OPC-589 8-pin mic jack adapter cable .....	35.99
OPC-647 8.2' mic extension cable .....	54.99
SP-10 Slim-line external speaker .....	69.99
IC-V8000 75w 2m FM Xcvr w/WX alert/scan	199.99
CS-V8000 Windows cloning software .....	35.99
OPC-478 PC RS-232C cable .....	45.99
OPC-478U PC USB cable .....	60.99
OPC-347 23' DC cable .....	46.99
OPC-440 16.4' mic extension cable .....	85.99
OPC-441 16.4' speaker extension cable ...	33.99
OPC-474 Radio to radio cloning cable .....	18.99
OPC-589 8-pin mic jack adapter cable .....	35.99
OPC-647 8.2' mic extension cable .....	54.99
OPC-1132 9.8' DC cable .....	28.99
SP-10 Slim-line external speaker .....	69.99
UT-108 DTMF decoder unit .....	35.99
V8000-MMB Extra mobile bracket .....	26.99
CS-207 DOS prog software; IC-207H .....	9.99
CSW-207/2710 Win cloning soft; 207/2710 ..	30.99
HM-98S Extra TTP mic; original IC-2100H ..D	90.99
OPC-600 11.5' separation cable; IC-207H ..	45.99
OPC-646 Prog cbl; CS-207/CSW-207/2710 ..	89.99
RMK-3 Package; MB-58/OPC-600/OPC-647 ..	84.99
UT-89 Tone scan/decode unit; IC-2350H ...	89.99
UT-104 Tone squelch unit; IC-2710H .....	39.99



Icom - continued	AES Price
<b>IC-208H</b> 55w 2m/50w 440 FM Xcvr .....	329.99
<b>CS-208</b> Win cloning software .....	35.99
<b>OPC-478</b> PC RS-232C cable .....	45.99
<b>OPC-478U</b> PC USB cable .....	60.99
<b>MB-17A</b> Quick release bracket .....	49.99
<b>MB-58</b> Remote controller bracket .....	39.99
<b>MB-65</b> Mounting base platform .....	35.99
<b>OPC-347</b> 23' DC cable .....	46.99
<b>OPC-440</b> 16.4' mic extension cable .....	85.99
<b>OPC-441</b> 16.4' speaker extension cable .....	33.99
<b>OPC-474</b> Radio to radio cloning cable .....	18.99
<b>OPC-589</b> 8-pin mic jack adapter cable .....	35.99
<b>OPC-601</b> 23' separation cable .....	60.99
<b>OPC-647</b> 8.2' mic extension cable .....	54.99
<b>OPC-1132</b> 9.8' DC cable .....	28.99
<b>SP-10</b> Slim-line external speaker .....	69.99
<b>IC-2720H</b> 50w 2m/35w 440 FM Xcvr .....	379.99
<b>CS-2720</b> Win/DOS cloning software .....	35.99
<b>OPC-478</b> PC RS-232C cable .....	45.99
<b>OPC-478U</b> PC USB cable .....	60.99
<b>MB-17A</b> Quick release bracket .....	49.99
<b>MB-84</b> Extra remote controller bracket .....	18.99
<b>MB-65</b> Mounting base platform .....	35.99
<b>MB-85</b> Combination bracket .....	25.99
<b>OPC-347</b> 23' DC cable .....	46.99
<b>OPC-440</b> 16.4' mic extension cable .....	85.99
<b>OPC-441</b> 16.4' speaker extension cable .....	33.99
<b>OPC-474</b> Radio to radio cloning cable .....	18.99
<b>OPC-589</b> 8-pin mic jack adapter cable .....	35.99
<b>OPC-647</b> 8.2' mic extension cable .....	54.99
<b>OPC-1132</b> 9.8' DC cable .....	28.99
<b>OPC-1156</b> 11.5' separation cable .....	26.99
<b>SP-10</b> Slim-line external speaker .....	69.99
<b>CS-2800</b> Windows cloning software; 2800H $\Delta$ .....	12.99
<b>OPC-872</b> Controller extension cable; 2800H $\Delta$ .....	24.99
<b>UT-84</b> Tone squelch unit; IC-2700H/821H $\Delta$ .....	89.99
<b>IC-910H</b> 100w 2m/75w 430 FM/SSB Xcvr .....	1099.99
<b>PS-125</b> 25A switching power supply .....	299.99
<b>AG-25</b> 2m mast mounted GaSFET preamp .....	159.99
<b>AG-35</b> 430 MHz mast mounted preamp .....	169.99
<b>AG-1200</b> 1.2 GHz mast mt preamp .....	159.99
<b>AG-2400</b> 2.4GHz mast mt down converter .....	499.99
<b>CR-293</b> High stability xtal unit .....	279.99
<b>CT-17</b> Cl-V level converter .....	129.99
<b>FL-132</b> 500 Hz main Rcvr CW filter .....	119.99
<b>FL-133</b> 500 Hz sub band Rcvr CW filter .....	119.99
<b>MB-5</b> Mobile mount .....	59.99
<b>MB-23</b> Side mount carrying handle .....	15.99
<b>SM-20</b> Deluxe desk microphone .....	199.99
<b>SP-7</b> Small external speaker .....	94.99
<b>SP-10</b> Slim-line external speaker .....	69.99
<b>UT-102</b> Voice synthesizer .....	74.99
<b>UT-106</b> Plug-in DSP unit (one per band) .....	139.99
<b>UX-910</b> 10w 1.2GHz module .....	499.99
<b>ID-1</b> 10w 1.2GHz FM/128k digital Xcvr/ctl head .....	1349.99
<b>ID-RP10/V5</b> 1.2GHz analog/digital repeater .....	3899.99
<b>ID-RP11</b> 10GHz backbone digital repeater .....	6299.99
<b>AH-1080</b> 100GHz parabola antenna .....	1099.99
<b>AH-1415</b> 1.2GHz colinear antenna .....	2169.99

#### Accessories for IC-2AT

<b>BC-25U</b> Extra wall cgr; BP-3 only .....	$\Delta$ \$ 19.99
<b>BM-112U/BC-16U</b> Wall cgr; 5/7/8 only .....	$\Delta$ 26.99
<b>BP-4</b> Alkaline battery case .....	$\Delta$ 35.99
<b>BP-8</b> 8.4v 800mah long life battery .....	$\Delta$ 99.99
<b>CP-1</b> Cig cgr; BP-3/7/8/DC cord .....	$\Delta$ 24.99
<b>CP-11</b> Cig cord w/noise filter .....	$\Delta$ 39.99
<b>DC-1</b> DC operation module .....	$\Delta$ 39.99
<b>IC-T2H Sport</b> 6w 2m FM HT/battery holder .....	99.99
<b>AD-81</b> Batt pack adapter for rapid charger .....	17.99
<b>BC-110A/BC-74</b> Extra wall charger .....	40.99
<b>BC-119-N01</b> Desk charger (adapter required) .....	84.99

Icom - continued	AES Price
<b>BC-133</b> Drop-in trickle charger .....	39.99
<b>BC-122A</b> AC adapter for BC-133 .....	16.99
<b>BP-194</b> AA alkaline battery case .....	18.99
<b>BP-195</b> 9.6v 700mah nicad battery .....	42.99
<b>BP-196</b> 9.6v 1050mah nicad battery .....	39.99
<b>CP-12L</b> Rt angle cig charge cable w/filter .....	36.99
<b>CP-17L</b> Right angle cig cable for charger .....	24.99
<b>CS-T2</b> DOS prog software for IC-T2 .....	13.99
<b>OPC-474</b> Cloning cable (T2 to T2) .....	18.99
<b>OPC-478</b> PC RS-232C cable .....	45.99
<b>CSW-HH4</b> Windows prog soft w/cable; T2 .....	50.99
<b>HM-46</b> Slim-line speaker/mic .....	45.99
<b>HM-54</b> Hvy duty spkr/mic .....	83.99
<b>HM-75A</b> Remote control microphone .....	70.99
<b>HM-128</b> Earphone+microphone .....	25.99
<b>HM-131</b> Spkr/mic/earph jack/revolving clip .....	38.99
<b>HS-51</b> Headset w/VOX .....	96.99
<b>HS-94</b> Ear-piece style headset; use w/VS-1 .....	24.99
<b>VS-1</b> VOX-PTT unit for HS-94 .....	42.99
<b>LC-145</b> Carrying case for IC-T2 .....	38.99
<b>LCF3 Swivel</b> Leather case with swivel .....	50.99
<b>MB-68</b> Extra standard belt clip .....	5.99
<b>MB-74</b> Spring loaded belt clip .....	12.99
<b>MB-87</b> Swivel belt clip .....	9.99
<b>OPC-254L</b> Right angle mini DC chg cable .....	14.99
<b>SP-13</b> Earphone .....	4.99
<b>IC-V8</b> 5.5w 2m FM HT/batt/cgr/TTP .....	129.99
<b>AD-94-11</b> Adapter cup; BC-119-N01 .....	17.99
<b>BC-119-N01</b> Desk charger (adapter required) .....	84.99
<b>AD-101</b> Batt adapt; BP-211/BC-119-N01 .....	25.99
<b>BC-144-01/21</b> Desk charger with adapter .....	89.99
<b>BP-208</b> Battery case .....	18.99
<b>BP-209</b> 7.2v 1100mah 5.5w battery .....	53.99
<b>BP-210</b> 7.2v 1650mah 5.5w battery .....	80.99
<b>BP-211</b> 7.4v 1800mah lith ion battery .....	91.99
<b>BP-222</b> 7.2v 600mah 5.5w battery .....	35.99
<b>CP-17L</b> Right angle cig cable for charger .....	24.99
<b>CS-V8</b> Cloning software for IC-V8 .....	35.99
<b>OPC-474</b> Cloning cable (V8 to V8) .....	18.99
<b>OPC-478</b> PC RS-232C cable .....	45.99
<b>OPC-478U</b> PC USB cable .....	60.99
<b>HM-46L</b> Slim-line spkr/mic, rt angle plug .....	45.99
<b>HM-54</b> Hvy duty spkr/mic .....	83.99
<b>HM-75A</b> Remote control microphone .....	70.99
<b>HM-131L</b> Rt angle spkr/mic/earph jack/revolv clip .....	38.99
<b>HS-51</b> Headset w/VOX .....	96.99
<b>HS-94</b> Ear-piece style headset; use w/VS-1L .....	24.99
<b>VS-1L</b> Right angle VOX-PTT unit for HS-94 .....	42.99
<b>LCF3G Swivel</b> Leather case with swivel .....	50.99
<b>MB-68</b> Extra standard belt clip .....	5.99
<b>MB-74</b> Spring loaded belt clip .....	12.99
<b>MB-87</b> Swivel belt clip .....	9.99
<b>OPC-515L</b> Right angle DC cord for charger .....	20.99
<b>SP-13</b> Earphone .....	4.99
<b>UT-108</b> DTMF decoder unit .....	35.99
<b>IC-T2H</b> 5w 2m FM HT/batt/cgr/TTP .....	199.99
<b>IC-T7H</b> 6w 2m/440 FM HT/batt/cgr/TTP .....	189.99
<b>IC-W32A</b> 5w 2m/440 FM HT/batt/cgr/TTP .....	259.99
<b>AD-51</b> Batt pack adapt; W32A/rapid cgr .....	9.99
<b>AD-56</b> Batt pack adapt; T7H/T2A/rapid cgr .....	18.99
<b>BC-119-N11</b> Nicad/NIMH desk cgr (adapt required) .....	89.99
<b>BP-170</b> Battery case .....	35.99
<b>BP-172</b> 4.8v 950mah battery .....	91.99
<b>BP-173</b> 9.6v 600mah battery .....	99.99
<b>BP-180</b> 7.2v 600mah battery .....	83.99
<b>CP-12</b> Cig lighter cable w/filter .....	36.99
<b>CP-12L</b> Right angle cig cable w/filter .....	36.99
<b>CS-T7</b> DOS prog software for IC-T7H .....	13.99
<b>CSW-32</b> DOS prog software for IC-W32A .....	13.99
<b>OPC-474</b> Cloning cable W32A to W32A .....	18.99
<b>OPC-478</b> PC RS-232C cable .....	45.99

Icom - continued	AES Price
<b>CSW-HH4</b> Windows prog soft/cbl; T7H/W32A .....	50.99
<b>FA-1443B</b> Extra 2m/440 dual band duck $\Delta$ .....	29.99
<b>HM-46</b> Slim-line speaker/mic .....	45.99
<b>HM-46L</b> Slim-line spkr/mic, rt angle plug; T2A .....	45.99
<b>HM-54</b> Heavy duty spkr/mic .....	83.99
<b>HM-75A</b> Remote control microphone .....	70.99
<b>HM-128</b> Earphone+microphone .....	25.99
<b>HM-131</b> Spkr/mic/earph jack/revolving clip .....	38.99
<b>HS-10</b> Boom mic/headset .....	69.99
<b>HS-10SA</b> VOX unit .....	69.99
<b>HS-10SB</b> PTT switchbox .....	69.99
<b>HS-85</b> Headset w/VOX .....	89.99
<b>HS-94</b> Ear-pc headset; use w/VS-1 .....	24.99
<b>VS-1</b> VOX-PTT unit for HS-94 .....	42.99
<b>LC-125</b> Vinyl case; T2A w/BP170/171/172 D .....	2.99
<b>LC-126</b> Vinyl case; T2A w/BP173 $\Delta$ .....	19.99
<b>LC-128</b> Vinyl case; IC-W32A .....	38.99
<b>LC-136</b> Vinyl case; T7H w/BP170/171/172 .....	38.99
<b>LC-137</b> Vinyl case; T7H w/BP173/180 .....	38.99
<b>MB-30</b> Mobile/wall bracket .....	41.99
<b>NCP-1</b> Nylon chest pack .....	39.99
<b>OPC-254</b> Mini DC power cable .....	14.99
<b>OPC-254L</b> Right angle mini DC pwr cable .....	14.99
<b>SP-13</b> Earphone .....	4.99
<b>IC-Q7ABC</b> 350/300mw 2m/440 HT/batts/cgr .....	119.99
<b>AD-92SMA</b> SMA- BNC adapter .....	16.99
<b>BC-127A</b> Extra nicad charger .....	20.99
<b>HM-46</b> Slim-line speaker/mic .....	45.99
<b>HM-128</b> Earphone+microphone .....	25.99
<b>HS-85</b> Headset w/VOX .....	89.99
<b>SP-13</b> Earphone .....	4.99
<b>OPC-782</b> Plug adapt cbl; HM46/HS85/SP13 .....	16.99
<b>LC-146</b> Carrying case .....	22.99
<b>LC-146A</b> Carrying case .....	24.99
<b>AD-87</b> Batt pack adapter; rapid cgr; T81A $\Delta$ .....	8.99
<b>AD-88</b> PCB board; original BC-119-11 $\Delta$ .....	29.99
<b>BC-119-N21</b> Nicad/NIMH desk cgr (use adapt); T81A $\Delta$ .....	99.99
<b>BP-197</b> Battery case for 3 AA; IC-T81A $\Delta$ .....	24.99
<b>BP-198</b> 4.8v 700mah NiMH batt; IC-T81A $\Delta$ .....	49.99
<b>BP-199</b> 6v 700mah NiMH battery; IC-T81A $\Delta$ .....	69.99
<b>BP-200</b> 9v 760mah NiMH battery; T81A $\Delta$ .....	89.99
<b>CS-T81</b> Windows cloning soft; IC-T81A $\Delta$ .....	13.99
<b>LC-148</b> Carrying case; IC-T81A $\Delta$ .....	19.99
<b>IC-T90A</b> 5w 6m/2m/440 HT/batt/cgr/lith .....	269.99
<b>AD-92SMA</b> SMA- BNC adapter .....	16.99
<b>BC-139</b> Desk rapid charger .....	94.99
<b>BP-216</b> Battery case for 2 AA .....	35.99
<b>BP-217</b> 7.4v 1300mah lith ion battery .....	89.99
<b>CP-19R</b> Cig lighter cable w/filter .....	44.99
<b>CS-T90A</b> Windows cloning software; IC-T90A .....	35.99
<b>OPC-474</b> Cloning cable (radio to radio) .....	18.99
<b>OPC-478</b> PC RS-232C cable .....	45.99
<b>OPC-478U</b> PC USB cable .....	60.99
<b>HM-46</b> Slim-line speaker/mic .....	45.99
<b>HM-75A</b> Remote control microphone .....	70.99
<b>HM-128</b> Earphone+microphone .....	25.99
<b>HM-131</b> Spkr/mic/earph jack/revolving clip .....	38.99
<b>HS-85</b> Headset w/VOX .....	89.99
<b>HS-94</b> Ear-pc headset; use w/VS-1 .....	24.99
<b>VS-1</b> VOX-PTT unit for HS-94 .....	42.99
<b>LC-152A</b> Carrying case .....	24.99
<b>MB-83</b> Swivel belt clip .....	9.99
<b>SP-13</b> Earphone .....	4.99

#### Accessories for IC-2SAT/2SRA/24AT/W2A

<b>AH-20</b> Replacement rcv ant; IC-2SRA $\Delta$ .....	$\Delta$ \$ 24.99
<b>BP-83</b> 7.2v 600mah battery .....	$\Delta$ 79.99
<b>BP-84</b> 7.2v 1000mah battery .....	$\Delta$ 99.99
<b>BP-90</b> AA alkaline battery case .....	$\Delta$ 35.99
<b>IC-26XAT/HP</b> 7w 2m HT/batt/cgr/TTP .....	$\Delta$ 249.99
<b>AD-25</b> Battery charger adapter .....	$\Delta$ 49.99
<b>AD-28</b> Batt pack adapter for rapid charger .....	18.99



**Icom - continued**

BC-105A/BC-77 Extra wall charger .....	24.99
BC-119-N11 Nicad/NiMH desk cgr (adapt required) .....	89.99
BP-130A Battery case .....	35.99
BP-157A 7.2v 900mah battery .....	85.99
BP-174 12v 600mah battery .....	79.99
HM-46 Slim-line speaker/mic .....	45.99
HM-46L Slim-line spkr/mic, rt angle plug .....	45.99
HM-54 Heavy duty spkr/mic .....	83.99
HM-128 Earphone+microphone .....	25.99
HS-51 Headset w/VOX .....	96.99
HS-94 Ear-piece style headset; use w/VS-1 .....	24.99
VS-1 VOX-PTT unit for HS-94 .....	42.99
MB-30 Mobile/wall bracket .....	41.99
OPC-288 Mini DC power cable .....	19.99
SP-13 Earphone .....	4.99
AD-44 Batt adapter; rapid cgr; T21A .....	.29
IC-110 Vinyl case; BP-153; ICT21A .....	.49

**ACCESSORIES**

AG-25 2m mast mounted GaSFET preamp .....	\$159.99
AG-35 430 MHz mast mounted preamp .....	169.99
AG-1200 1.2 GHz mast mt preamp .....	159.99
CT-17 CI-V level converter .....	129.99
HM-12 Scan hand microphone .....	74.99
MB-23 Side mount carrying handle .....	15.99
OPC-137 Adapter cable; older Icom Xcvr .....	19.99
PS-125 25A switching power supply .....	299.99
SM-6 Electret desk microphone .....	99.99
SM-20 Deluxe desk microphone .....	199.99
SP-5 Mobile speaker .....	49.99
SP-7 Small external speaker .....	94.99
SP-10 Slim-line external speaker .....	69.99
SP-20 Speaker w/audio filter .....	239.99
SP-21 External speaker .....	119.99
Comic Book 1 Adventures of Zack and Max .....	4.95

**CONSUMER ELECTRONICS**

A-23 5w compact Navicom air handheld .....	\$399.99
IC-M1V Waterproof 5w VHF marine handheld .....	199.99
IC-M3A 5w VHF marine handheld w/AA nicads .....	159.99
IC-M45AW* White 25w VHF marine Xcvr .....	149.99
* \$20 rebate from Yaesu thru 12/31/03! USA only	
IC-M40W2 White waterproof 25w VHF marine .....	199.99
M-710 (21) 150w HF marine SSB .spec order .....	1399.99
AT-130 HF marine auto ant tuner spec order .....	449.99
M-802 150w DSP marine SSB Xcvr spec order .....	1749.99
IC-4088A Dlx family radio service handheld .....	89.99
BP-202 Nicad battery; IC-4088A/4088A .....	17.99
CP-18A Cig lighter cable .....	30.99
HM-46 Slim-line speaker/mic .....	45.99
HM-75A Remote control microphone .....	70.99
HM-128 Earphone+microphone .....	25.99
HM-131 Spkr/mic/earph jack/revolving clip .....	38.99
HS-51 Headset w/VOX .....	96.99
HS-85 Headset w/VOX .....	89.99
HS-94 Ear-piece style headset; use w/VS-1L .....	24.99
VS-1 VOX-PTT unit for HS-94 .....	42.99
IC-F21-GM 15 ch 4w GMRS/FRS handheld .....	149.99

**IDIOM PRESS (IDI)**

K-3 Logkeyer CW keyer .....	\$129.99
HK-3 Hook-up kit .....	10.99

**International Ant (IAC)**

160m double Bazooka 248' antenna .....	\$214.99
160m double Bazooka Shorty 168' antenna .....	229.99
80m double Bazooka 121' antenna .....	150.99
80m double Bazooka Shorty 84' antenna .....	159.99
40m double Bazooka 64' antenna .....	126.99
40m double Bazooka Shorty 40' antenna .....	129.99
160m-S 160m half sloper 127' antenna .....	140.99
80m-S 80m half sloper 67' antenna .....	115.99
40m-S 40m half sloper 33' antenna .....	69.99

**AES Price****IRON HORSE (See ATOC)**

<b>ISOTRON (ISO)</b>	
160C 160m 9.5' x 16' x 15' 100 KHz bandwidth ant .....	\$173.99
80 80m 32' x 16' x 15' 110 KHz bandwidth ant .....	98.99
40 40m 22' x 16' x 15' 250 KHz bandwidth ant .....	88.99
20 20m 21' x 8' x 4' 350 KHz bandwidth ant .....	78.99
15 15m 21' x 1.5' x 4' 450 KHz bandwidth ant .....	78.99
10 10m 16' x 1.5' x 4' 1 MHz bandwidth ant .....	78.99
6 6m 16.5' x 2' x 4' 1.25 MHz bandwidth ant .....	78.99
80/40 Combo* 80/40m 32' x 16' x 30' ant .....	177.99
*Requires coaxial "T"s & jumpers - not included	
20/15/10 Combo 20/15/20m combo ant .....	198.99

**K-KOM (KCO)**

RF-1 Modular telephone 3-30 MHz RFI filter .....	\$ 16.99
RF-1/Low Modular phone .5-3 MHz RFI filter .....	16.99
RF-1/2-line 2-line modular 3-30 MHz RFI flt .....	22.99
RF-1/coiled Coiled cord modular 3-30MHz flt .....	22.99
RF-2 Hard-wired telephone 3-30 MHz RFI flt .....	10.99
RF-2/Low Hard-wired phone .5-3 MHz RFI flt .....	10.99

**KANTRONICS (KAN)**

KPC-3 Plus/128K Small packet TNC/128K RAM .....	\$186.99
KPC-9612 Plus/128K 9600 controller/128K .....	349.99
(CSS) Pacterm 98 Software; Kantronics TNCs .....	79.99
12VDC Adaptor 300ma adaptor; KPC-3 .....	12.99
Host Master II+ IBM software .....	89.99
Superfax II WX FAX program for IBM .....	D
KAM 98 Single port multi-mode dig controller .....	399.99
(CSS) Pacterm 98 Software; Kantronics TNCs .....	79.99
12VDC Adaptor 300ma adaptor; KAM 98 .....	12.99
KAM XL All mode TNC w/DSP modems .....	399.99
(CSS) Pacterm 98 Software; Kantronics TNCs .....	79.99
12VDC Adaptor 300ma adaptor; KAM XL .....	12.99
APRS adapter cable; GPS to Kantronics TNC .....	32.99

**KENWOOD (KEN)**

DRU-2 Dig recording unit; TS-950SDX .....	\$139.99
SP-950 Ext spkr/audio filters; TS-950SDX .....	149.99
TS-B2000 PC ctrl HF/6m/2m/430 Xcvr/tuner .....	1549.99
Heil Goldline mic/accs from Kenwood thru 11/29/03!	
TS-2000 HF/6m/2m/430 Xcvr/ant tuner .....	1699.99
Heil Goldline mic/accs from Kenwood thru 11/29/03!	
*UT-20 1.2GHz module Kenwood install only	
TS-2000X HF/6m/2m/430/1.2 Xcvr/tuner .....	2299.99
Heil Goldline mic/accs from Kenwood thru 11/29/03!	
KPS-15 23A switching ps w/fan, 25A surge .....	149.99
PS-53 Heavy duty 22.5A power supply .....	249.99
ARCP-2000 PC control soft (inc w/TS-B2000) .....	82.99
DRU-3A Digital recording unit .....	129.99
MB-430 Mobile mounting bracket .....	49.99
MC-43S Extra 8-pin hand mic w/up-down .....	59.99
MC-57DM Backlit TTP hand mic .....	79.99
MC-60A 8-pin amp desk mic w/up-down .....	149.99
MC-80 8-pin electret desk mic w/up-down .....	109.99
MC-90 2-head DSP desk microphone .....	239.99
PG-2Y 13' DC cable .....	39.99
PG-2Z 6.5' heavy duty DC cable .....	37.99
RC-2000 Remote faceplate mobile kit .....	349.99
SP-23 External speaker .....	89.99
VS-3 Voice synthesizer .....	39.99
TS-870S 9-band Xcvr/Rcvr/IFDSP/tuner .....	2299.99
KPS-15 23A switching ps w/fan, 25A surge .....	149.99
PS-52 Heavy duty power supply .....	269.99
DRU-3A Digital recording unit .....	129.99
MC-43S Extra 8-pin hand mic w/up-down .....	59.99
MC-60A 8-pin amp desk mic w/up-down .....	149.99
MC-80 8-pin electret desk mic w/up-down .....	109.99
MC-90 2-head DSP desk microphone .....	239.99
PG-2Y 13' DC cable .....	39.99
PG-2Z 6.5' heavy duty DC cable .....	37.99

**Kenwood - continued**

SO-2 TCXO unit .....	179.99
SP-31 External speaker .....	99.99
VS-2 Voice synthesizer .....	D
TS-570D(G)* 9-band Xcvr/Rcvr/AFDSP/tuner/mic .....	1089.99
* \$100 rebate from Kenwood thru 11/29/03!	
Heil Goldline mic/accs from Kenwood thru 11/29/03!	
TS-570S(G)* 9-band Xcvr/Rcvr/AFDSP/tune/mic .....	1259.99
* \$100 rebate from Kenwood thru 11/29/03!	
Heil Goldline mic/accs from Kenwood thru 11/29/03!	
KPS-15 23A switching ps w/fan, 25A surge .....	149.99
PS-53 Heavy duty 22.5A power supply .....	249.99
DRU-3A Digital recording unit .....	129.99
MB-430 Mobile mounting bracket .....	49.99
MC-43S 8-pin hand mic w/up-down .....	59.99
MC-60A 8-pin amp desk mic w/up-down .....	149.99
MC-80 8-pin electret desk mic w/up-down .....	109.99
MC-90 2-head DSP desk microphone .....	239.99
PG-2Y 13' DC cable .....	39.99
PG-2Z 6.5' heavy duty DC cable .....	37.99
SO-2 TCXO unit .....	179.99
SP-23 External speaker .....	89.99
SP-50B High quality external mobile spkr .....	55.99
VS-3 Voice synthesizer .....	39.99
YK-88C-1 500 Hz CW filter .....	129.99
YK-88CN-1 270 Hz CW filter .....	129.99
YK-88SN-1 1.8 KHz SSB filter .....	129.99
TS-50S Compact HF Xcvr/SW Rcvr/mic/mt .....	649.99
KPS-15 23A switching ps w/fan, 25A surge .....	149.99
PS-53 Heavy duty 22.5A power supply .....	249.99
AT-50 External HF auto tuner .....	329.99
PG-4M 18' extension cable for AT-50 .....	29.99
MC-47 Extra multi-func 8-pin hand mic .....	59.99
MC-60A 8-pin amp desk mic w/up-down .....	149.99
MC-80 8-pin electret desk mic w/up-down .....	109.99
PG-2Y 13' DC cable .....	39.99
PG-2Z 6.5' heavy duty DC cable .....	37.99
SO-2 TCXO unit .....	179.99
SP-23 External speaker .....	89.99
SP-50B High quality external mobile spkr .....	55.99
TC-50/50Case Travel case for TS-50S/60S .....	89.99
YK-107C 500 Hz CW filter .....	129.99
7-pin DIN plug .....	4.99
8-pin DIN plug .....	6.99
13-pin DIN plug .....	9.99
HS-5 Deluxe headphones .....	79.99
HS-6 Lightweight headphones .....	59.99
KPS-15 23A switching ps w/fan, 25A surge .....	149.99
LF-30A 1kw PEP low pass filter .....	64.99
MC-43S 8-pin hand mic w/up-down switch .....	59.99
MC-60A 8-pin amp desk mic w/up-down .....	149.99
MC-80 8-pin electret desk mic w/up-down .....	109.99
PG-3B 15A DC line noise filter .....	29.99
SP-50B High quality external mobile speaker .....	55.99
TSU-5 Prog CTCSS decoder; TS-790A .....	D
TU-7 Prog encoder; 2550/751A/TW-4100A .....	54.99
TU-8 CTCSS tone unit; TS-450S/690S .....	D
YG-455C-1 500 Hz CW filter; TS-450/690 .....	149.99
TM-642AD 50w 2m/25w 220FM/backlit TTP mic .....	739.99
TM-742AD 50w 2m/35w 440 FM/backlit TTP .....	639.99
DFK-3 9' separate display cable kit .....	26.99
DFK-4 13' remote cable kit .....	59.99
DFK-7 Deluxe 22' remote cable kit .....	89.99
MJ-88 Modular to 8-pin mic adapter .....	30.99
PG-2N Extra DC cable .....	17.99
TSU-7 CTCSS decoder unit .....	59.99
SP-50B High quality external mobile spkr .....	55.99
UT-50S 50w 6m unit .....	329.99
UT-220S 25w 220 MHz unit .....	329.99
UT-440S 35w 440 MHz unit .....	299.99
UT-1200 10w 1.2 GHz unit .....	399.99



## Kenwood - continued AES Price

<b>TM-D700A</b> 50w 2m/35w 440 FM/1200/9600 ..	519.99
<b>MB-201</b> Extra mobile bracket .....	25.99
<b>MI-88</b> Modular to 8-pin mic adapter .....	30.99
<b>PG-2N</b> Extra DC cable .....	17.99
<b>PG-4X</b> 13' extension cable kit .....	69.99
<b>PG-5A</b> Packet data cable .....	15.99
<b>SP-50B</b> High quality external mobile spkr ..	55.99
<b>VS-3</b> Voice synthesizer .....	39.99
<b>TM-G707A</b> 50w 2m/35w 440 FM/TTP mic ..	269.99
<b>TM-V7A</b> 50w 2m/35w 440 FM Xcvr/TTP mic ..	399.99
<b>DFK-3C</b> 9' separate display cable kit .....	44.99
<b>DFK-4C</b> 13' remote cable kit .....	64.99
<b>DFK-7C</b> Deluxe 23' remote cable kit .....	99.99
<b>MB-201</b> Extra mobile bracket .....	25.99
<b>MI-88</b> Modular to 8-pin mic adapter .....	30.99
<b>PG-2N</b> Extra DC cable .....	17.99
<b>PG-4S</b> PC interface cable .....	32.99
<b>PG-5A</b> Packet data cable .....	15.99
<b>SP-50B</b> High quality external mobile spkr ..	55.99
<b>VS-3</b> Voice synthesizer .....	39.99
<b>TM-331A</b> 25w 220 FM Xcvr w/TTP mic .....	499.99
<b>KQT-8/TSU-6</b> Prog CTCSS decoder .....	49.99
<b>MB-201</b> Extra mobile bracket .....	25.99
<b>PG-2N</b> Extra DC cable .....	17.99
<b>SP-50B</b> High quality external mobile spkr ..	55.99
<b>TM-541A</b> 10w 1.2 GHz FM Xcvr/TTP/encoder ..	449.99
<b>KQT-8/TSU-6</b> Prog CTCSS decoder .....	49.99
<b>MB-201</b> Extra mobile bracket .....	25.99
<b>PG-2N</b> Extra DC cable .....	17.99
<b>SP-50B</b> High quality external mobile spkr ..	55.99
<b>TM-261A</b> 50w 2m FM Xcvr w/TTP mic .....	149.99
<b>TM-461A</b> 35w 440 FM Xcvr w/TTP mic .....	439.99
<b>MB-201</b> Extra mobile bracket .....	25.99
<b>MI-88</b> Modular to 8-pin mic adapter .....	30.99
<b>PG-2N</b> Extra DC cable .....	17.99
<b>SP-50B</b> High quality external mobile spkr ..	55.99
<b>TSU-8</b> CTCSS decoder .....	59.99
<b>MC-45DM</b> Multi-function modular TTP mic .D	19.99
<b>MC-57DM</b> Back-lit TTP mic;241/331/441/541 ..	79.99
<b>MC-58DM</b> Back-lit TTP mic;251/733/742/255/NTA	79.99
<b>ME-1</b> Mem expansion; TH-28A/78A/TM-251A D	2.99
<b>TH-22ATH</b> 5w 2m FM HT/batt/cgr/TTP .....	199.99
<b>BT-9</b> 4-AA battery holder .....	29.99
<b>EMC-3</b> Lapel clip mic/ear piece .....	29.99
<b>HMC-3</b> VOX/boom mic headset .....	59.99
<b>KSC-8A</b> Drop-in cgr; 25/26/75/71/22/42/79 ..	26.99
<b>KSC-14</b> 2-pack rapid charger .....	59.99
<b>PB-33</b> 6v 1200mah battery .....	89.99
<b>PB-34</b> 9.6v 600mah 5w battery .....	89.99
<b>PG-2W</b> DC cable w/fuse .....	17.99
<b>PG-3J</b> Cig lighter cord w/filter .....	36.99
<b>SMC-32</b> Mini water resist rt angle spkr/mic ..	52.99
<b>SMC-33</b> Speaker/mic w/remote control .....	65.99
<b>SMC-34</b> Spkr/mic w/vol cont/function keys ..	69.99
<b>TSU-8</b> CTCSS decoder; TH-22/42AT .....	59.99
<b>WR-2</b> Water resistant bag; TH-22/42AT .....	29.99
<b>TH-K2AT</b> 5w 2m FM HT/batt/cgr/TTP .....	159.99
<b>BT-14</b> 6-AA battery holder .....	19.99
<b>EMC-3</b> Lapel clip mic/ear piece .....	29.99
<b>HMC-3</b> VOX/boom mic headset .....	59.99
<b>KHS-21</b> Boom mic headset .....	39.99
<b>KSC-24</b> Rapid charger .....	46.99
<b>PB-43N</b> 7.2v 1100mah NiMH battery .....	44.99
<b>PG-2W</b> DC cable w/fuse .....	17.99
<b>PG-3J</b> Cig lighter cord w/filter .....	36.99
<b>PG-4Y</b> Programming cable .....	32.99
<b>SC-54</b> Soft case .....	16.99
<b>SMC-32</b> Mini water resist rt angle spkr/mic ..	52.99
<b>SMC-33</b> Speaker/mic w/remote control .....	65.99
<b>SMC-34</b> Spkr/mic w/vol cont/function keys ..	69.99
<b>WR-2</b> Water resistant bag; TH-22/42AT .....	29.99

## Kenwood - continued AES Price

<b>TH-G71A</b> 5w 2m/440 FM HT/batt/cgr/TTP ..	229.99
<b>TH-D7A(G)</b> 5w 2m/440 FM HT/1200/9600 TNC ..	359.99
<b>BC-19</b> Rapid charger .....	64.99
<b>BT-11</b> 4-AA battery holder .....	17.99
<b>HMC-3</b> Lapel clip mic/ear piece .....	29.99
<b>HMC-3</b> VOX/boom mic headset .....	59.99
<b>J29-0631-13</b> Belt clip for batt; D7A/G71A ..	4.99
<b>PB-39</b> 9.6v 600mah 5w battery .....	57.99
<b>PG-2W</b> DC cable w/fuse .....	17.99
<b>PG-3J</b> Cig lighter cord w/filter .....	36.99
<b>PG-4P</b> Computer control cable .....	32.99
<b>PG-4V</b> VC-H1 cable for TH-D7A(G) .....	49.99
<b>PG-4W</b> PC software/cable; TH-D7A(G) .....	55.99
<b>SC-45</b> Soft case for TH-G71A/PB-38/39 .....	15.99
<b>SC-47B</b> Black soft case for TH-D7A(G) .....	15.99
<b>SC-47OR</b> Orange soft case for TH-D7A(G) ..	15.99
<b>SMC-32</b> Mini water resist rt angle spkr/mic ..	52.99
<b>SMC-33</b> Speaker/mic w/remote control .....	65.99
<b>SMC-34</b> Spkr/mic w/vol cont/function keys ..	69.99
<b>WR-2</b> Water resistant bag .....	29.99
<b>TH-F6A</b> 5w 2m/220/440 FM HT/lith ion batt ..	329.99
<b>BT-13</b> AA battery case .....	25.99
<b>HMC-3</b> Lapel clip mic/ear piece .....	29.99
<b>HMC-3</b> VOX/boom mic headset .....	59.99
<b>KHS-21</b> Boom mic headset .....	39.99
<b>PB-42L</b> Extra 7.4v 1550mah lithium ion batt ..	79.99
<b>PG-2W</b> DC cable w/fuse .....	17.99
<b>PG-3J</b> Cig lighter cord w/filter .....	36.99
<b>PG-4P</b> Computer control cable .....	32.99
<b>SC-51</b> Soft case w/swivel belt clip .....	16.99
<b>SMC-32</b> Mini water resist rt angle spkr/mic ..	52.99
<b>SMC-33</b> Speaker/mic w/remote control .....	65.99
<b>SMC-34</b> Spkr/mic w/vol cont/function keys ..	69.99
<b>WR-2</b> Water resistant bag .....	29.99
<b>E59-0407-08</b> 16-pin DIN plug only; VCH-1 ..	19.99
<b>KCT-24S</b> VCH-1 to PC software/cable .....	39.99
<b>SC-46P</b> Protective case for VCH-1 .....	14.99

## CONSUMER ELECTRONICS

<b>KTC-H2A1*</b> Sirius portable satellite radio tuner	\$ 99.99
*Subscription required	
<b>KCA-FM</b> FM modulator for wireless installation	39.99
<b>KPA-H2C</b> Car docking kit w/magnetic ant ..	69.99
<b>KPA-H2H</b> Home docking kit w/desktop ant ..	69.99
<b>TKM-707</b> 150w HF marine SSB Xcvr spec order	1249.99
<b>KAT-1</b> HF marine auto ant tuner ..spec order	569.99
<b>UBZ-LH148K</b> Deluxe FRS black handheld .....	69.99
<b>EMC-3</b> Label clip mic/ear piece .....	29.99
<b>HMC-3</b> VOX/boom mic headset .....	59.99
<b>SMC-34</b> Spkr/mic w/vol cont/function keys ..	39.99
<b>UBC-3</b> Nicad desk charger .....	14.99
<b>UPB-2</b> Nicad battery pack .....	24.99
<b>USC-5B</b> Black nylon case .....	15.99

## KESTER (KES)

82-5000-0004 5 oz 60/40 solder, .040 dia .. \$ 1.99

## KLEINHUIS (KLE)

1309 Isolated grounding bar .. \$ 14.99

## KOSS (KOS)

<b>KTX/8</b> Collapsible stereohead w/vol control ..	\$ 14.99
<b>QZ/5</b> Passive noise reduction stereohead ..	49.99
<b>QZ/50</b> Active noise reduction stereohead ..	49.99
<b>QZ/99</b> Noise reduction stereohead w/mono sw ..	59.99
<b>QZ/2000</b> Active noise reduction stereohead ..	169.99
<b>Y-88</b> Dual stereohead Y-adaptor .....	4.99

## KURANISHI (KUR)

BR-200 1.7-180MHz SWR/antenna analyzer .. \$369.99

## LDG (LDG)

<b>AT-11MP</b> 160-10m auto antenna tuner .....	\$219.99
<b>MP-Head</b> MP remote head .....	29.99

## LDG - continued AES Price

<b>MP-AL-Cable</b> MP Alinco interface cable ..D	10.99
<b>MP-IC-Cable</b> MP Icom interface cable .....	10.99
<b>AC-1</b> Power & control interface .....	8.99
<b>AL-IC1</b> Alinco 10' interface cable .....	20.99
<b>Icom-IC1</b> Icom 10' interface cable .....	20.99
<b>Icom-IC2</b> Icom 8' interface cable .....	8.99
<b>K-OTT</b> Kenwood one-touch tune interface ..	59.99
<b>RBA-1</b> Remote 4:1 balun; long/random/end fed	30.99
<b>AT-1000</b> 1000w PEP HF/100w 6m auto tuner	549.99
<b>RC-1000</b> Remote control for AT-1000 .....	99.99
<b>AT-897</b> Bolt-on auto tuner for Yaesu FT-897 ..	199.99
<b>RBA-1</b> Remote 4:1 balun; long/random/end fed	30.99
<b>MAC-600</b> Motorized antenna controller .....	139.99
<b>AC-1</b> Power & control interface .....	8.99
<b>AL-IC1</b> Alinco 10' interface cable .....	20.99
<b>Icom-IC1</b> Icom 10' interface cable .....	20.99
<b>Icom-IC2</b> Icom 8' interface cable .....	8.99
<b>K-OTT</b> Kenwood one-touch tune interface ..	59.99
<b>RT-11</b> 160-6m remote auto antenna tuner ...	199.99
<b>RT-Remote</b> RT remote head .....	39.99
<b>AC-1</b> Power & control interface .....	8.99
<b>AL-IC1</b> Alinco 10' interface cable .....	20.99
<b>Icom-IC1</b> Icom 10' interface cable .....	20.99
<b>Icom-IC2</b> Icom 8' interface cable .....	8.99
<b>K-OTT</b> Kenwood one-touch tune interface ..	59.99
<b>RBA-1</b> Remote 4:1 balun; long/random/end fed	30.99
<b>Z-11</b> 30w QRP auto antenna tuner .....	169.99
<b>RBA-1</b> Remote 4:1 balun; long/random/end fed	30.99
<b>Z-100</b> 1 to 125w auto antenna tuner .....	149.99
<b>AC-1</b> Power & control interface .....	8.99
<b>AL-IC1</b> Alinco 10' interface cable .....	20.99
<b>Icom-IC1</b> Icom 10' interface cable .....	20.99
<b>Icom-IC2</b> Icom 8' interface cable .....	8.99
<b>K-OTT</b> Kenwood one-touch tune interface ..	59.99
<b>RBA-1</b> Remote 4:1 balun; long/random/end fed	30.99

## LA CROSSE (LAC)

<b>WS-2010</b> Professional wireless weather stn ..	\$389.99
<b>WS-2010-13</b> PC interface/software .....	129.99
<b>WS-2310</b> Wireless/wired weather center .....	249.99
<b>WS-7013U</b> Wireless temperature station .....	24.99
<b>WS-7038UF</b> Wireless rain gauge .....	59.99
<b>WS-7075UF</b> Wireless forecast station .....	59.99
<b>WS-8015U</b> Dlx sun/moon wireless WX stn ..D	159.99
<b>WS-8017U-Dak</b> Atomic clock w/in/out temp ..	39.99
<b>WS-9016U</b> Sun/moon wireless weather stn ..	79.99
<b>WT-5431</b> Projection alarm w/remote temp ....	49.99
<b>TX-3U</b> Extra temp sensor w/LCD; all WX units	15.99
<b>3362U</b> Power cost controller .....	29.99
<b>IR-101</b> Infra-red thermometer .....	49.99
<b>RS-204U</b> Remote control outlet .....	29.99

## LAKEVIEW (LAK)

<b>9175</b> 75m 7' Hamstick antenna .....	\$ 24.99
<b>9140</b> 40m 7' Hamstick antenna .....	24.99
<b>9130</b> 30m 7' Hamstick antenna .....	24.99
<b>9120</b> 20m 7' Hamstick antenna .....	24.99
<b>9117</b> 17m 7' Hamstick antenna .....	24.99
<b>9115</b> 15m 7' Hamstick antenna .....	24.99
<b>9112</b> 12m 7' Hamstick antenna .....	24.99
<b>9110</b> 10m 7' Hamstick antenna .....	24.99
<b>9106</b> 6m 4.5' Hamstick antenna .....	24.99
<b>901</b> Dipole mount for 2 Hamsticks .....	14.99
<b>IM-1</b> Inducti-match for 75-12m mobile ant ..	17.99
<b>TM-1</b> License plate mount, 3/4-24 .....	44.99
<b>TM-1-Plus</b> License plate mount, SO-239 .....	44.99

## LARSEN (LAR)

### 27-31 MHz ANTENNA

<b>NMO-27B</b> 10m black ant only (no mount) .....	\$ 36.99
<b>NMO-27C</b> 10m ant only (no mount) .....	33.99



## Larsen - continued

## AES Price

### 47-54 MHz ANTENNA

NMO-50B 6m black ant only (no mount) ..... \$ 36.99

NMO-50C 6m ant only (no mount) ..... 33.99

### 144-174 MHz ANTENNAS

NMO-150B 2m black ant only (no mt), 3 db .. \$ 33.99

NMO-150C 2m ant only (no mount), 3 db ..... 30.99

### 220-265 MHz ANTENNAS

NMO-220B 220 black ant only (no mt), 3 db \$ 36.99

NMO-220C 220 ant only (no mount), 3 db .... 30.99

### 440-460 MHz ANTENNAS

NMO-440B 440 black ant only (no mt), 4.5db \$ 35.99

NMO-440C 440 ant only (no mount), 4.5 db .. 29.99

MM-2/70PL 2m/440 ¼ wave/2db mag mt ant 50.99

NMO-2/70B 2m/440 blk ant only (no mt), 2/4db .. 65.99

NMO-2/70C 2m/440 ant (no mount), 2/4db .... 60.99

NMO-2/70-SH 2m/440 ant (no mt), ¼ wv/2db 40.99

NMOQ-Spec 136-512 MHz ¼ wave ant (no mt) 13.99

NMOQ-Spec-B 136-512 MHz ¼ wv ant (no mt) 15.99

NMOQ-Spec-K 136-512MHz blk wv ¾" hole ant 28.99

NMOQ-2/70-B 2m/440 ¼ wv cell look ant (no mt) .. 36.99

GPS-NMO02 GPS NMO mount ant (no mt) .... 79.99

NMO-150450800 3-band scanner ant (no mt) 29.99

### ON GLASS ANTENNAS

KG-144-UD-PL 2m 3 db on glass antenna ... \$ 83.99

KG-220-UD-PL 220 3 db on glass antenna .... 83.99

KG-440-UD-PL 440 2.4 db on glass antenna 71.99

KG-2/70-CX-PL 2m/440 2.5/4.5db on glass .. 116.99

KG-Reinstall Reinstall kit for KG-ants ..... 8.99

### KULDUCKIES - For Hand-helds

KD4-146 2m BNC Kulduckie .....D \$ 20.99

KD4-270 2m/440 BNC Kulduckie ..... 36.99

KD4-222 220 BNC Kulduckie .....D 19.99

KD14-445 440 ¼ wave BNC Kulduckie ..... 19.99

KD4-146-HQ 2m part helical, part ¼ wave BNC 25.99

KD14-2M-HW 2m ¼ wave BNC antenna ..... 38.99

KD14-440-HW 440 ¼ wave BNC antenna .....Δ 29.99

### ACCESSORIES

BSA-K Base mtg kit; NMO/UHF mt mobile ant \$ 53.99

NMO-B38 NMO mt hdw/A-7 NLA adapter ..... 13.99

NMO-CAP-B Black rain cap for NMO mount .. 4.99

NMO-K ¾" hole mt w/coax for NMO ant ..... 15.99

NMO-MM Magnet mt, coax for NMO ant ..... 32.99

NMO-TLP Low profile tnk lid mt, coax; NMO ant 29.99

PO-K Roof mt, coax for NMO-239 ant ..... 30.99

PO-MM Magnet mt, coax for SO-239 ant ..... 36.99

PO-TLM Trunk lip mt, coax for SO-239 ant ..D 14.99

RG-SS Extra super seal NMO gaskets (3) ..... 5.99

SPRING Shock spring ..... 10.99

TMB-34 Trunk mtg bkt for NMO antenna ..... 5.99

TMB-34B Black trunk mtg bkt for NMO ant .. 7.99

W-2/70B 2m/440 black replacement whip ... 27.99

W-490 49" replacement whip ..... 9.99

W-490B Black 49" replacement whip ..... 12.99

## LIGHTWAVE (LIG)

LW-HT 4 LED/3 AA-cell illuminator head torch \$ 39.99

LW-PB 1 LED/2 liti-cell pocket flashlight ... 19.99

LW-2000 4 LED/3 AA-cell flashlight ..... 29.99

LW-3000 7 LED/3 C-cell flashlight ..... 49.99

LW-4000 10 LED/3 D-cell flashlight ..... 59.99

## LOGSAT (LOG)

Logsat Professional Satellite tracking CDROM \$ 69.99

## LOSI (LOS)

A0014 XXX-4 4WD electric Competition buggy kit \$269.99

A0090 XXX-T Sport RTR w/XR2i electric car .. 269.99

## M<sup>2</sup> (MSQ)

KT-36XA 20/15/10m 6el 32' boom beam ..... 1299.99

## M<sup>2</sup> - continued

## AES Price

40M-1LXD 6.9-10 MHz rotatable dipole ..... 499.99

20M-4DX 20m 7.4db 4el 34' boom beam ..... 599.99

17M-3DX 17m 6.3db 3el 18' boom beam ..... 449.99

17M-5DX 17m 8.6db 5el 36' boom beam ..... 589.99

15M-4DX 15m 8.5db 4el 33' 8" boom beam .. 499.99

12M-4DX 12m 8.6db 4el 27' boom beam ..... 449.99

10M-4DX 10m 8.7db 4el 23' boom beam ..... 449.99

6M-3 6m 50-50.6 or 51-54.6 4db 3el 6'9" bm beam 149.99

6M-5X 6m 50-50.5 or 51-54.9 4db 5el 18' bm beam 249.99

6M-7JHV 6m 50-50.4 10.9db 7el 30'8"bm beam 299.99

6M-2WLC 6m 49.7-50.5 11.9db 9el 39' 6" boom T\* 499.99

\*6M-2WLC is drop-shipped (shipped direct to you from the M<sup>2</sup> factory). On these factory drop-shipsments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Fresno, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order items.

6M-9KHW 6m 50-50.4 12.7db 9el 49' 4" bm beam 549.99

6M-HO-LOOP 6m 50-50.3 4.4db horiz loop ant 113.99

6" x 1/2" 3/8-24 mobile mast for loop ..... 10.99

16" x 1/2" 3/8-24 mobile mast for loop ..... 12.99

18" x 5/8" 3/8-24 mobile mast for loop ..... 17.99

36" x 1/2" 3/8-24 mobile mast for loop ..... 28.99

50" x 1/2" 3/8-24 mobile mast for loop ..... 31.99

MAST BKT KIT For 6M-HO-LOOP ..... 19.99

2M-4 2m 7.5db 4el 4' boom beam ..... 113.99

2M-7 2m 10.3db 7el 8'10" boom beam ..... 127.99

2M-9FM 2m 145-148 12db 9el 14' 6" bm beam 149.99

2M-9SSB 2m 144-146 12db 9el 14' 6" bm beam 149.99

2M-12 2m 12.8db 12el 19'6" boom beam .... 199.99

2M-5WL 2m 14.8db 17el 33' boom beam ..... 249.99

2M-18XXH 2m 144-146 15.3db 18el 36'3"bm beam 289.99

2M-8WLHD 2m 144-144.7 17db 21el 55'bm beam 599.99

2M-CP14 2m 10.3db 7h/7v 10'6"bm circ beam 215.99

2M-CP22 2m 12.5db 11h/11v 18'6"bm circ beam 289.99

PS-2M 2m polarity switch; circ pol beam .. 169.99

FG X-Boom Kit For circular antennas, etc. 159.99

2M-XP20 144-146 13.3db 10h/10v cross polar Δ 179.99

2M-XP28 144-146 15.1db 14h/14v cross polar Δ 249.99

2M5-440XP 2m/440 9/12db 5/10el 5'8"bm beam 199.99

2M-HO-LOOP 2m 144-144.5 4.8db horiz loop 49.99

6" x 1/2" 3/8-24 mobile mast for loop ..... 10.99

16" x 1/2" 3/8-24 mobile mast for loop ..... 12.99

18" x 5/8" 3/8-24 mobile mast for loop ..... 17.99

36" x 1/2" 3/8-24 mobile mast for loop ..... 28.99

50" x 1/2" 3/8-24 mobile mast for loop ..... 31.99

Big-Foot 4x-mag mt; 2M-HO-LOOP stack/etc 119.99

MAG-KIT Magnet mt kit; single 2m-HO-LOOP 24.99

MAST BKT KIT For 2M-HO-LOOP ..... 19.99

STACK-KIT Stack kit for 2m-HO-LOOP's ..... 74.99

TOP BKT KIT For 2M-HO-LOOP ..... 24.99

EB-144/RK-2M 2m Eggbeater w/reflector kit 199.99

222-7EZ 220 9.8db 7el 5' 8" boom beam ..... 109.99

222-10EZ 220 12db 10el 9' 9" boom beam .. 125.99

222-5WL 220 15.2db 15el 23'3" boom beam .. 199.99

222-7WL 220 16.4db 23el 32'5" boom beam 249.99

222-XP30 220 15.2db 15h/15v cross polar Δ 199.99

222-HO-LOOP 220-224 4.75db horiz loop ant .. 49.99

6" x 1/2" 3/8-24 mobile mast for loop ..... 10.99

16" x 1/2" 3/8-24 mobile mast for loop ..... 12.99

18" x 5/8" 3/8-24 mobile mast for loop ..... 17.99

36" x 1/2" 3/8-24 mobile mast for loop ..... 28.99

50" x 1/2" 3/8-24 mobile mast for loop ..... 31.99

MAG-KIT Magnet mt kit; single 222-HO-LOOP 24.99

440-470-5W 440-470 7.8db 5el 2'2"bm beam 149.99

420-50-11 432 11.3db 11el 5'bm rear mt beam 109.99

440-18 432 14.5db 18el 11'4" boom beam ... 149.99

440-21ATV 432 15.9db 21el 14'6"bm ATV beam 169.99

## M<sup>2</sup> - continued

## AES Price

436-CP30 432 14.5db 15h/15v 9'9"bm circ beam 289.99

436-CP42UG 432 16.8db 21h/21v 18'10"bm circ 329.99

PS-70CM 432 polarity switch; circ pol beam 169.99

FG X-Boom Kit For circular antennas, etc. 159.99

432-9WL 432 17.3db 28el 21' boom beam ..... 199.99

432-13WLA 432 18.6db 38el 30'8"bm beam 269.99

432-HO-LOOP 432-436 5db horiz loop ant ... 49.99

6" x 1/2" 3/8-24 mobile mast for loop ..... 10.99

16" x 1/2" 3/8-24 mobile mast for loop ..... 12.99

18" x 5/8" 3/8-24 mobile mast for loop ..... 17.99

36" x 1/2" 3/8-24 mobile mast for loop ..... 28.99

50" x 1/2" 3/8-24 mobile mast for loop ..... 31.99

Big-Foot 4x-mag mt; 432-HO-LOOP stack/etc 119.99

MAG-KIT Mag mt kit; single 432-HO-LOOP .... 24.99

STACK-KIT-70CM Stack kit; 2 432-HO-LOOP's 74.99

TOP BKT KIT For 432-HO-LOOP ..... 24.99

EB-432 432 Eggbeater omni/hor/rf/circ overhead D 119.99

EB-432/RK-70CM 432 Eggbeater w/reflector kit 189.99

902-6W 900MHz 10db 6el 2' boom beam ..... 69.99

902-10EZ 900MHz 12.6db 10el 3'5"bm beam 99.99

902-18EZ 900MHz 14.8db 18el 5'4"bm beam 159.99

23CM-22EZA 1.2GHz 16db 22el 5'2"bm beam 149.99

23CM-35 1.2GHz 18.4db 35el 10'bm beam ... 189.99

2M-2-Port-PD 2m 2-port type N power divider 69.99

70CM-2-Port-PD 432 2-port N power divider 69.99

23CM-2-Port-PD 1.2GHz 2-port N power divider 69.99

FAST MAST 20' extended port alum mast ...D 129.99

OR-2800PDC 35 sq ft azimuth rotor/control/8-wire 1399.99

RC-2800PP Control box; prop pitch .spec order 549.99

## MFJ ANTENNA TUNERS (MFJ)

989C Dlx 1.2kw PEP w/roller inductor ..... \$319.99

986 1.2kw PEP w/roller inductor ..... 299.99

962D 1.5kw PEP meter/switch/balun/roller ind 249.99

969 HF & 6m 300w roller inductor tuner ..... 189.99

949E 300w/PEP meter/dummy/switch/balun .... 139.99

948 300w meter/switch/balun ..... 119.99

941E 300w tuner w/meter, switch, balun ..... 109.99

945E 300w tuner w/meter plus 6m ..... 99.99

20 Mobile bracket for 945E ..... 4.99

901B Versa Tuner 200w ant tuner ..... 79.99

910 80-10m mobile antenna matcher ..... 19.99

16010 200w random wire tuner ..... 49.99

902 80-10m 150w travel tuner ..... 69.99

903 6m antenna tuner ..... 49.99

906 6m antenna tuner w/wattmeter ..... 79.99

914 Auto tuner extender ..... 59.99

921 2m/220 300w PEP tuner/SWR/wattmeter 69.99

922 2m/440 150w tuner/SWR/wattmeter ..... 79.99

924 440 300w PEP tuner/SWR/wattmeter 69.99

934 300w tuner w/artificial ground ..... 169.99

## MEMORY KEYS

451 Dedicated CW keyboard w/memory ..... \$ 99.99

452 CW keyboard/kyer w/disp/keyboard ..... 129.99

452X CW keyboard/kyer w/disp, no keyboard 99.99

498 Dlx CW keyboard/kyer w/disp/keyboard 179.99

490 492 keyer/Bencher paddle combo ..... 189.99

490X 492 keyer for use w/Bencher or 564 ..... 99.99

564 Deluxe iambic paddle for 490X ..... 49.99

492 192 char menu driven memory keyer .... 89.99

495 Millennium memory keyer ..... 149.99

5409 9-pin serial port 6' cable for 493 .....Δ 4.99

5425 25-pin serial port 6' cable for 493 .....Δ 4.99

## ELECTRONIC KEYS

4070 Deluxe electronic keyer ..... \$ 69.99

4010 Econo keyer ..... 49.99

## KEYER/PADDLES

422D Keyer/Bencher paddle combination ..... \$159.99

422DX Keyer only ..... 79.99

441 SlimLine econo keyer ..... 59.99



**MFJ - continued**

442 SlimLine keyer/Benchner paddle combo	149.99
442X SlimLine keyer only	59.99
447 SlimLine deluxe keyer	79.99
564 Deluxe iambic chrome paddle	49.99
564B Deluxe iambic black paddle	49.99

**COMPUTER INTERFACES**

1224 Interface	\$ 99.99
1265 Disk software for VIC/C64; 1224	.99
1285 Software for IBM; 1224	19.99
1270C Packet radio TNC2	119.99
1278B Multi-mode controller w/Pactor	279.99
1278B/DSP Controller w/Pactor & DSP	359.99
48 1278 upgrade	24.99
52 TNC2 deviation meter board	19.99
780 DSP data filter for 1278B	59.99
1282 C64 starter pack	.99
1282BD Multicom 64 disk only	.69
1284D 1284 disk only	.49
1284M 3 1/2" IBM starter pack	24.99
1284W MFJCOM for Windows	29.99
1287B Mac multicom starter pack	4.99
1287D 1287 disk only	.99
1288 Packet terminal program	.69
1289D 1289 disks only	1.99
1289H Multicom host software for IBM	69.99
1289M 3 1/2" multicom software for IBM	59.99
1289MD 1289M disks only	14.99
1289W Multicom for Windows with cable	59.99
1289WD Multicom for Windows, less cable	49.99
1214PC Multimode interface for IBM	139.99
781 DSP filter for any TNC or controller	89.99
1272B TNC to microphone interface	39.99
1272BYH TNC/mic switch; KAM HF	39.99
1272BYV TNC/mic switch; KAM VHF	39.99
1272M TNC/mic RJ-45 switch; MFJ/PK-900	39.99
1272MYV TNC/mic RJ-45 sw; KAM VHF; KPC3	39.99

**SSB/CW FILTERS**

722 SSB/CW notch filter	\$ 49.99
751B Super tunable CW audio filter	69.99
752C Dual tunable SSB/CW filter	89.99
784B Deluxe tuneable DSP filter	229.99
5184 Cable pack for 784B	7.99

**PHONE PATCH**

624D Phone patch w/audio VU meter	\$119.99
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**DUMMY LOADS**

250 2kw PEP dummy load w/oil	\$ 59.99
250X 2kw PEP dummy load, less oil	39.99
21 1 gal industrial xfm oil for wet dummy	24.99
260C 300w 0-650 MHz dry dummy load	34.99
260CN 300w 0-650 MHz type N dry dummy	39.99
264 1.5kw 0-650 MHz dry dummy load	69.99
264N 1.5kw 0-650 MHz type N dry dummy	74.99
267 1.8-54 100w dry dummy load/SWR/wattmeter	139.99

**SWR/WATTMETERS**

812B 144-220 MHz SWR/FS/wattmeter	\$ 34.99
815B 160-6m cross-needle SWR/wattmeter	79.99
816 1.8-30 MHz toroidal SWR/wattmeter	34.99
817 2m/440 cross needle meter	89.99
841 2m 5w in-line HT wattmeter/SWR	39.99
844 Compact 2m/440 SWR/wattmeter	69.99
860 1.8-60 MHz cross-needle meter	44.99
862 2m/220/440 cross-needle meter	54.99
864 1.8-60MHz/2m/440 cross needle meter	84.99
870 1.6-60MHz Grandmaster SWR/wattmeter	124.99
872 1.8-200MHz Grandmaster SWR/wattmeter	94.99
873 125-525MHz Grandmaster SWR/wattmeter	104.99
874 1.8-525MHz Grandmaster SWR/wattmeter	159.99

**SHORTWAVE ACCESSORIES**

306 Car radio SWL converter	\$ 89.99
956 LW/MW/SW preselector/tuner	49.99

**MFJ - continued**

959C SW receiver ant tuner w/preamp	99.99
1020C 3-30 MHz indoor active receive ant	79.99
1022 300KHz-200MHz active rcv antenna	49.99
1024 .05-30 MHz outdoor active rcv ant	129.99
1040B Deluxe receiver preselector	99.99
1045C Receiver preselector	69.99

**BOOKS**

30 Golden Classics book	\$ 9.95
32 Packet Made Easy book	9.95
33 Mobile Handbook book	12.95
36 Shortwave Listeners Guide; Apts/Condos	9.95
37 Ham Communications Circuit Files book	9.95
38 Easy-up Antennas book	16.95
3036 The Packet Radio Operators book	12.95
3101 Fox Hunt Adventure book	7.95
3211 Technician license guide	9.95
3213 General license guide	9.95
3301 Troubleshooting Antenna & Feedlines book	12.95
3302 73 Dipole and Long-Wire Antennas	12.95
3303 73 Vertical, Beam, and Triangle Ants	12.95
3305 Antennas & Transmission Lines book	19.95
3400 Morse Code: Breaking the Barrier	19.95
3502 Solid State ORP Projects	12.95
3504 FET Principles, Experiments & Projects	16.95
3506 Ferromagnetic-Core Design book	19.95
3507 Practical RF Design Manual	19.95
3509 Ladder Crystal Filters	19.95

**CLOCKS**

105C 24-hour quartz wall clock	\$ 19.99
107B 24-hour digital clock	9.99
108B 24/12-hour dual disp digital clock	19.99
112B Deluxe world map clock	24.99
113 24/12-hr 1.8" LED clock/batt back-up	19.99
115 DX'er 24-hour analog world wall clock	24.99
1160C 12-hour 12vdc LED clock	9.99
118 Giant 24/12 hour LED clock	24.99
123 Eternity solar atomic clock	79.99
125 Calendar 24-hour analog wall clock	29.99

**ANTENNAS**

343 1 1/4" hole mount for 3/8-24 whip	\$ 9.99
1402 2m/440 0/3db 16.5" 100w ant only	34.99
1412 2m/440 3.2/5.5db 40" 200w ant only	49.99
1422 2m/440 3.2/5.7db 41.5" 150w ant only	49.99
1432 2m/440 5/7.6db 62.5" 150w ant only	69.99
1436 6m/2m/440 2.15/4.5/7.2db 59" ant only	79.99
3338M 3.5" HiFlux NMO mag mt; not 1436	14.99
3338S 3.5" HiFlux SO-239 magt mt not 1436	14.99
3358M 5" HiFlux NMO mag mt; not 1436	19.99
3358S 5" HiFlux SO-239 mag mt; not 1436	19.99
340 Mirror/luggage pipe clamp mount	34.99
345 Trunk/hatchback lip mount	34.99
1516 2m 15' vertical base antenna	89.99
1621 40-10m 54" portable ant w/tuner	89.99
1622 40-2m apartment antenna	89.99
1624 40-6m mini bugcatcher antenna	79.99
1661 20-6m manual screwdriver antenna	119.99
1664 40-6m manual screwdriver antenna	159.99
1710 2m 1/2 wave telescopic antenna	9.99
1712 2m/440 telescopic antenna	14.99
1713 2m/440 SuperFlex Thin Duk HT ant	19.99
1713S 2m/440 SuperFlex SMA Thin Duk ant	19.99
1714 2m 1/2 wave telescopic antenna	16.99
1715 2m/440 SuperFlex gain Thin Duk HT ant	24.99
1715S 2m/440 SuperFlex gain SMA Thin Duk	24.99
1716 2m/440 duck for HT	16.99
1716S 2m/440 SMA duck for HT	16.99
1717 2m/2.15db 440 duck for HT	21.99
1717PL 2m/440 foldover flexi-duck, PL-259	24.99
1717S 2m/2.15db 440 SMA duck for HT	21.99
1719 2m/440/1.2GHz Midget Duck	19.99
1719S 2m/440/1.2GHz SMA Midget Duck	19.99

**MFJ - continued**

1720S 6m/2m/440 SMA Duck	29.99
1721 2m HT UltraLite mag mt antenna	14.99
1722 2m/440 HT UltraLite mag mt antenna	18.99
1724B 2m/440 magnet mt antenna	16.99
1727 10m magnet mt antenna	39.99
1728B 6m 1/2 wv/2m 1/2 wv mag ant/PL259/BNC	29.99
1729 2m/440 magnet mt antenna	34.99
1730 2m pocket roll-up vertical antenna	19.99
1734 2m/440 2.6/3.3db glass mt antenna	39.99
1736 6m J-Pole travel antenna	29.99
1738 2m 2.6db glass mt antenna	29.99
94 Remount kit for 1734/1738	4.99
1740 2m 1/2 wave ground plane ant	19.99
1750 2m 1/2 wave ground plane ant	24.99
1752 220 1/2 wave ground plane ant	24.99
1754 2m/440 ground plane antenna	29.99
1756 6m DX vertical antenna	69.99
1762 6m 6db 3 el 6' boom beam	79.99
1763 2m 3el portable beam	44.99
1764 2 & 6m dual 1/2 super gain base ant	49.99
1768 2m/440 4/7 el beam antenna	79.99
1778 G5RV 160-10m 102' ant (needs tuner)	39.99
1786 Super Hi-Q 10-30 MHz loop/dx control	349.99
1788 Super Hi-Q 40-15m loop/dx controller	389.99
1796 40/20/15/10/6/2m 10' vertical ant	189.99
1798 80/40/30/20/17/15/12/10/6/2m 20' vert	269.99
1899T 80-6m telescopic antenna for FT-817	129.99
1910 33' telescoping fiberglass mast	79.99

**CABLES**

5020 MFJ TNC - Yae FT50R/compat	\$ 15.99
5020YV KAM VHF/KPC3 - Yae FT50R/compat	15.99
5022 MFJ TNC - Alinco/Standard HT cable	15.99
5022YV KAM VHF/KPC3 - Ali/Sta HT cable	15.99
5024 MFJ TNC - Ico/Yae/Alir/RS HT cable	15.99
5024B PK/PacComm/compat - Ico/Yae/RS	15.99
5024YV KAM VHF/KPC3 - Ico/Yae/Alir/RS HT	15.99
5026 MFJ TNC - Kenwood HT cable	15.99
5026YV KAM VHF/KPC3 - Kenwood HT cable	15.99
5060 MFJ TNC - Ken/Yae acc 6-pin mini DIN	19.99
5060YV KPC9612 - Ken/Yae acc 6-pin mini DIN	19.99
5060YV KAM VHF/KPC3 - Ke/Ya acc 6-pin mini DIN	19.99
5063 MFJ TNC - Icom HF acc 13-pin DIN	19.99
5063YH KAM DIN HF - Icom HF acc 8-pin DIN	19.99
5064 MFJ TNC - Icom VHF acc 8-pin DIN	19.99
5064YV KPC9612 - Icom VHF 8-pin DIN	1.99
5064YV KAM VHF/KPC3 - Ico VHF acc 8-pin DIN	4.99
5065 MFJ TNC - Ico IC-706 acc 13-pin DIN	19.99
5065YH KAM HF - Ico IC-706 acc 13-pin DIN	19.99
5065YV KAM VHF - Ico IC706 acc 13-pin DIN	19.99
5066 MFJ TNC - Kenwood HF acc 13-pin DIN	19.99
5066YH KAM HF - Ken HF acc 13-pin DIN	19.99
5080 MFJ TNC - Yaesu 8-pin cable	15.99
5080M MFJ TNC - Yaesu 8-pin modular	15.99
5080MYV KAM VHF/KPC3 - Yae 2500M/7400H	15.99
5080YH KAM HF port - Yaesu 8-pin cable	15.99
5080YV KAM VHF/KPC3 - Yaesu 8-pin cable	15.99
5082 Open end - 8-pin mic cable	9.99
5084 MFJ TNC - Icom 8-pin cable	15.99
5084M MFJ TNC - Icom 8-pin modular	15.99
5084MYV KAM VHF/KPC3 - Icom 8-pin mod	15.99
5084YH KAM HF port - Icom 8-pin cable	15.99
5084YV KAM VHF/KPC3 - Icom 8-pin cable	15.99
5086 MFJ TNC - Kenwood/Alinco 8-pin cable	15.99
5086M MFJ TNC - Kenwood 8-pin modular	15.99
5086MYV KAM VHF/KPC3 - Ken 8-pin mod	15.99
5086YH KAM HF port - Ken/Alir 8-pin cable	15.99
5086YV KAM VHF/KPC3 - Ken/Alir 8-pin cable	15.99
5088M MFJ TNC - Radio Shack 8-pin modular	15.99
5205 5-pin DIN open end cable	4.99
5208 Open end - Ico HF/VHF acc 8-pin DIN	9.99
5213 Open end - Kenwood acc 13-pin DIN	9.99



## MFJ - continued

5220R/5220	Open end - Yae FT50R/compat ..	9.99
5222	Open end - Ali split HT cable .....	9.99
5224	Open end - lco/Yae/Ali/RS HT cable .....	9.99
5268	Open end - modular phone plug cable ..	9.99
5412	IBM printer cable .....	9.99
5413	RS-232 6' cable DB-25M-25F .....	.99
5414	RS-232 6' cable DB-25M-9F .....	9.99
5803/10	3' coax jumper cable .....	5.99

## RADIOS/TRANSCIVERS

8100K	Shortwave regenerative Rcvr kit .....	\$ 69.99
8100W	Shortwave regenerative Rcvr wired .....	89.99
8621	5w 2m data radio w/145.01 MHz .....	139.99
8621X2	5w APRS ready 2m data radio/144.39 ..	149.99
4110	Portable AC power supply .....	49.99
5100	Data radio cable - MFJ/TAPR .....	15.99
5100YH	Data radio cable - KPC-9612 .....	.99
5100YV	Data radio cable - KAM/KPC-3 .....	15.99
5106	Open end - 6-pin mini Ken/Yae cable ..	4.99
8708	4ch ham micro ATV transmitter .....	149.99
9015	5w 15m CW Xcvr .....	169.99
9020	5w 20m CW Xcvr .....	169.99
9030	5w 30m CW Xcvr .....	169.99
9040	5w 40m CW Xcvr .....	169.99
212	Handle for CW station .....	4.99
47	Plug-in Curtis keyer .....	49.99
726	Plug-in audio filter .....	29.99
971	200w portable ant tuner w/meter .....	99.99
1772	Portable 20m dipole .....	39.99
1774	Portable 40m dipole .....	39.99
4110	Portable AC power supply .....	49.99
4114	Rechargeable power pack .....	69.99
9117B	9017 Xcvr/tuner/ps/ant package .....	199.99
9130B	9030 Xcvr/tuner/ps/ant package .....	249.99
9140B	9040 Xcvr/tuner/ps/ant package .....	269.99
9402X	7w PEP 2m SSB Xcvr w/mic .....	269.99
9406X	10w PEP 6m SSB Xcvr w/mic .....	249.99
9410X	20w PEP 10m SSB Xcvr w/mic .....	239.99
9420X	12w 20m SSB Xcvr w/mic .....	229.99
9440X	12w 40m SSB Xcvr w/mic .....	229.99
9475X	12w 75m SSB Xcvr w/mic .....	229.99
415B	SSB Xcvr CW adapter; 9420X/9440X ..	49.99
476	CW adapter for 9402X/9406X/9410X ..	49.99
917	200W HF portable ant tuner w/meter ..	99.99
1770A	10m dipole for 9410X .....	39.99
4110	Portable AC power supply .....	49.99
4114	Rechargeable power pack .....	69.99

## ACCESSORIES

1305	5v 300ma adapter .....	\$ 4.99
1306	6v 300ma adapter .....	14.99
1312	12vdc 300ma adapter, 2.5mm plug .....	14.99
1312D	12vdc 500ma adapter, 2.1mm plug .....	14.99
1316	12vdc 1.5A adapter .....	19.99
10-BCI-2	Charger cup; lcom BP-131/132 .....	.49
10-BCI-3	Charger cup; lcom BP-173/180 .....	.69
10-BCY-2	Cgr cup; Yae FNB10/11/12/17/27 .....	.69
15	HamGear belt loop radio holder .....	14.99
18	HamGear chest harness/cargo pocket ..	29.99
92AA01	1300ma AA NiMH cells .....	24.99
92AA10	10-pack 1300ma AA NiMH cells .....	24.99
201	1.5-250 MHz dip meter .....	109.99
202B	RF noise bridge .....	59.99
204B	HF Antenna bridge .....	79.99
206	Antenna current probe .....	D
207	160-10m SWR analyzer .....	79.99
208	2m SWR analyzer .....	79.99
209	1.8-170 MHz SWR analyzer .....	129.99
212	MatchMaker tune up device .....	79.99
219B	SWR analyzer, 440 MHz/VSO-239 adapt ..	89.99
224	2m FM signal analyzer .....	149.99
249B	1.8-170 MHz SWR analyzer/LCD counter ..	219.99

## MFJ - continued

259B	1.8-170 MHz SWR analyzer/RF res meter ..	239.99
269	1.8-170+440 MHz SWR analyzer/RF res mtr	319.99
29C	Carrying case w/window; 209/249B/259B	24.99
39C	Carrying case w/window; 269 .....	24.99
66	1.8-30/30-170 dip coils; 209/249B/259B	19.99
92AA10	10-pack 1300ma AA NiMH cells .....	24.99
98	Package of 39C/66/1312D for 269 .....	54.99
98B	Pack of 92AA10/39C/66/1312D for 269 ..	77.99
99	Pack of 29C/66/1312D; 209/249B/259B	54.99
99B	Pack 92AA10/29C/66/1312D; 209/249B/259B	77.99
99C	Pack - 92AA10/1312D; 209/249B/259B/269	34.99
731	RFI filter for SWR analyzer .....	89.99
1312D	12vdc 500ma ps for SWR analyzers .....	14.99
270	Guardian Angel 400w PEP lightning protect	29.99
97	Gas tube plug for 270 .....	9.99
281	ClearTone communications speaker .....	12.99
288I	Headset/mic; lcom/AD/Star/RS/older Yae	24.99
288K	Headset/mic for Kenwood .....	24.99
288Y	Headset/mic; lco Q7/Yae FT10/50/VX1 ..	24.99
291K	Earphone for Kenwood spkr/mic .....	D
292I	Earph/mic; lco/older Yae/compatibles ..	17.99
292Y	Earphone/mic; lco Q7/Yae FT10/50/VX1 ..	17.99
293I	Rubber flex earloop earbud/mic; lcom ..	24.99
293K	Rubber flex earloop earbud/mic; Kenwood	24.99
293Y	Rubber flex earloop earbud/mic; Yaesu	24.99
295I	Mini spkr/mic; lcom & compatible HT ..	15.99
295K	Mini spkr/mic; Kenwood & compatible HT	15.99
295Y	Mini spkr/mic; lco Q7/Yae FT10/50/VX1	15.99
297	Desk mic with flexible boom .....	69.99
5082	Open end - 8-pin mic cable for 297 ..	9.99
5268	Open end - mod phone plug cbl; 297 ..	9.99
5397I	Cable/8-pin for 297; lcom HF .....	15.99
5397K	Cable/8-pin for 297; Kenwood HF .....	15.99
5397Y	Cable/8-pin for 297; Yaesu HF .....	15.99
5397MX	Cable/modular for 297; lcom/Kenwood	15.99
5397MY	Cable/modular for 297; Yaesu .....	15.99
310	BNC HT antenna window mount clip .....	14.99
341M	17' antenna cable; NMO .....	19.99
341S	17' antenna cable; SO-239 .....	19.99
382	Deluxe amplified communications spkr ..	39.99
384	Dlx amp spkr w/speech control knob ..D	29.99
1306	6v 300ma adapter for 384 only .....	14.99
388	Cyber Ear 12db ear amplifier .....	29.99
392B	Deluxe communication headphones .....	19.99
394	Boom mic/single headphone .....	D
5396I	Adapter; 394/396 with lco Xcvr .....	4.99
5396K	Adapter; 394/396 with Ken Xcvr .....	4.99
5396Y	Adapter; 394/396 with Yae Xcvr .....	4.99
414	Professional Morse Tutor w/LCD .....	189.99
417	Code Tutor with QSO .....	59.99
418	Code Tutor with LCD display .....	79.99
434	Deluxe Voice Memory Keyer .....	169.99
73	Remote control head w/cable for 434 ..	29.99
461	Pocket size Morse code reader .....	79.99
5161	DB-9 PC serial port cable .....	14.99
5162	Cable for radio external speaker .....	5.99
462B	RTTY/ASCII/CW/AMTOR Rcvr multi-reader	169.99
5162	Cable for radio external speaker .....	5.99
464	CW reader w/built-in keyer .....	169.99
550	Hand key .....	7.99
554	Deluxe CW practice oscillator .....	79.99
557	Code oscillator w/key .....	29.99
616	Speech intelligibility enhancer .....	159.99
1316	12vdc 1.5A adapter .....	19.99
281	ClearTone speaker (requires 2) .....	12.99
392B	Deluxe communication headphones .....	19.99
631	Trickle wall charger; NiMH/nicad AA .....	9.99
633	Rapid charger; NiMH/nicad AA/AAA/9V ..	24.99
641-Y3	Battery charger; Yaesu FNB-31/33 .....	6.99
10-BCY-3	Charger cup; Yae FNB-31/33 .....	.69
662	Simplex pocket repeater .....	79.99

## MFJ - continued

701	Toroid RFI filters .....	pack of 4	14.99
704	1kw low-pass filter .....		49.99
711	High pass filter .....	D	19.99
762	81db 170MHz BNC attenuator .....		69.99
801	Super compact field strength meter .....		19.99
802	Bipolar field strength meter .....		39.99
802R	Field strength remote meter .....		24.99
802X	Field strength/remote meter combo .....		59.99
850	RFI current detector meter .....		79.99
850	AC line voltage monitor .....		19.99
852	Power line noise current meter .....		89.99
854	HF RF current meter .....		89.99
886	1MHz - 3GHz pocket frequency counter ..		109.99
888	Deluxe 10Hz - 3GHz frequency counter ..		174.99
890	DX beacon monitor .....		99.99
912	W9INN remote balun .....		49.99
916	2m/440 duplexer .....		29.99
931	Artificial ground unit .....		89.99
1025	Noise canceling antenna .....		149.99
1026	Deluxe noise canceling unit w/antenna		169.99
1046	1.6-33MHz receiver passive preselector		89.99
1048	1.6-33MHz Xcvr passive preselector .....		109.99
1112	Multiple DC outlet .....		34.99
1116	Dlx multiple DC outlet .....		49.99
1117	High current multiple DC outlet .....		54.99
1118	Dlx high current multiple DC outlet .....		74.99
1213	Interface for JVFA/HamComm .....		49.99
1262	Microphone switch; 8-pin round .....		79.99
1268	IBM PC memory keyer .....	D	.69
1273B	Basic soundcard interface/soft; 8P-R ..		59.99
1273BM	Basic soundcard interface/soft; 8P-M ..		59.99
1275	Soundcard/rig interface/software; 8P-R ..		99.99
1275M	Soundcard/rig interface/software; 8P-M ..		99.99
1279	Super soundcard interface/soft; 8P-R ..		129.99
1279M	Super soundcard interface/soft; 8P-M ..		129.99
1292	Video digitizer for IBM .....		4.99
1683I	Rig Windows software for lcom .....	D	.99
1683K	Rig Windows software for Kenwood ..D		.99
1700B	Combination ant/xmtr switch .....		79.99
1701	6-position coax switch .....		49.99
1702C	2-pos coax switch/lightning protect ..		24.99
1702CN	2-pos 1.1GHz N switch/lightning protect		34.99
1704	4-pos 500 MHz switch/lightning protect		64.99
1704N	4-position type N switch .....		74.99
1925	Controller; Yaesu ATAS-100/other rigs ..		59.99
1925I2	Controller; Yae ATAS-100/lco IC-706 ..		59.99
4035MV	Dlx 30A adjustable ps, 35A surge .....		139.99
4103	Switching power supply for Yaesu FT-817		39.99
4125MV	MightyLite 22A 3.5 lb switch ps, 25A surge		99.99
4225MV	MightyLite 22A switching ps, 25A surge		139.99
4245MV	MightyLite 40A switching ps, 45A surge		189.99

## MG Electronics (MGE)

HFS-1 10w mobile spkr, 3.5mm plug .....

D \$ 9.99

## MAGELLAN (MAG)

00-19060-000	Pwr/data cbl; Tracker/ColorTrak ..	\$ 4.99
730275	Ext pwr cbl w/cig adapt; MAP330 .....	14.99
730277	PC cable/cig adapter; MAP330 .....	29.99
Meridian XL	GPS/plotter/detachable ant/case D	89.99
Meridian GPS	GPS with 2MB base map .....	169.99
Meridian Gold	GPS with 16MB base map .....	249.99
Meridian Platinum	GPS/16MB/compass/barometric	349.99
Meridian Color	Handheld color GPS/16MB ..	499.99
980611	MapSend Topo CD-ROM .....	99.99
980613-01	MapSend Streets & Destinations CD	99.99
980654-01	MapSend DirectRoute; Gold/Plat/Col	149.99
SporTrak*	GPS receiver w/1MB memory .....	169.99
*\$30 rebate from Magellan thru 10/31/03!		
SporTrak Map	GPS w/2MB map+4MB mem .....	199.99
SporTrak Pro	GPS w/9MB map+23MB mem .....	269.99
SporTrak Color	Handheld color GPS/9MB .....	449.99



## Magellan - continued AES Price

980611	MapSend Topo CD-ROM .....	99.99
980613-01	MapSend Streets & Destinations CD .....	99.99
980654-01	MapSend DirectRoute; Pro/Color .....	149.99

## MAHA (MAH)

9V	8.4v 1700mah 9v size NiMH batt cell ....	\$ 8.99
AAA-T	1.2v 6500mah AAA size NiMH batt cell ea	2.99
AA-B	1.2v 1400mah AA NiMH batt w/batts D, ea	2.99
4-AA-180	4pack 1.2v 1800mah AA NiMH cells .....	14.99
4-AA-220-BH	4pack 1.2v 2200mah AA NiMH cells .....	18.99
MH-C124S	Reg cgr; 1-4 AA/AAA NiMH/NiCd .....	9.99
MH-C204F	Quik cgr/cond; 2/4 AA/AAA NiMH/NiCd .....	24.99
MHS-DC-124	Cig adapt; MH-C124S/C204F .....	5.99
MH-C204F8A22	Charger/8 AA/2200car adapt .....	49.95
MH-C401FS	100min/5hr AA/AAA cgr w/4 AA NiMH D	39.99
MH-C401FS4A22	Charger/4 AA/2200car adapt .....	49.95
MH-BP-8	13.2v 1000mah lcom nickel hydride .....	69.99
MH-BP-8	8.4v 1200mah lcom nickel hydride .....	59.99
MH-BP-8H	8.4v 1800mah lcom nickel hydride .....	49.99
MH-BP-83	7.2v 1300mah lcom nickel hydride .....	49.99
MH-BP-132B	12v 1300mah lco blk nick hyd/mic .....	39.99
MH-BP-132G	12v 1300mah lco gray nick hyd/mic .....	39.99
MH-BP-173	9.6v 6500mah lcom nickel hydride .....	69.99
MH-BP-180	7.2v 1000mah lcom nickel hydride .....	49.99
MH-BP-196M	9.6v 1350mah lcom nick hydride .....	49.99
MH-BP-199	6v 700mah lcom nick hydride/clip .....	55.99
MH-BP-200	9.6v 680mah lcom nick hydride/clip .....	59.99
MH-CNB-152	12v 1000mah Sta nickel hydride .....	59.99
MH-CNB-153	7.2v 1300mah Sta nickel hydride .....	49.99
MH-FNB-12	12v 1000mah Yaesu nickel hydride .....	59.99
MH-FNB-17	7.2v 1000mah Yaesu nickel hydride .....	49.99
MH-FNB-27	12v 900mah Yaesu nickel hydride .....	59.99
MH-FNB-31	4.8v 650mah Yae nickel hydride .....	39.99
MH-FNB-38	9.6v 650mah Yaesu nickel hydride .....	39.99
MH-FNB-40H	7.2v 1000mah Yae nick hyd/spg clip .....	49.99
MH-FNB-41	9.6v 1000mah Yae nick hyd/spg clip .....	55.99
MH-FNB-V47	7.2v 1800mah Yae nick hyd/spg clip .....	69.99
MH-FNB-V57	7.2v 1500mah Yae nickel hydride .....	49.99
MH-FNB-58LI	1200mah li-polymer; Yae VX5R .....	59.99
MH-FNB-72	9.6v 1700mah Yae nickel hydride .....	59.99
MH-PB-8	12v 1300mah Kenwood nickel hydride .....	62.99
MH-PB-17	12v 1300mah Kenwood nickel hydride .....	69.99
MH-PB-18	7.2v 1300mah Ken nick hyd; wal cgr only .....	49.99
MH-PB-32	6v 1000mah Kenwood nickel hydride .....	47.99
MH-PB-34	9.6v 1000mah Kenwood nickel hydride .....	57.99
MH-PB-39	9.6v 1050 mah Ken nickel hyd/clip .....	59.99
MH-PB-39H	6v 1800mah Ken nickel hyd/clip .....	59.99
MH-PB-42LI	1800mah li-polymer; Ken THF6A .....	69.99
MH-C777	Univ cgr/conditioner/cig cord; nicad/nimh	49.99
MHS-CW4	Clip-leads for external charging .....	3.99
MH-C777 Plus	Univ cgr/analy; lith/nicd/nimh D	69.99
MH-C777 Plus II	Univ cgr/analy; lith/nicd/nimh	89.99
MH-C888	Univ drop-in rapid cgr/cond; nicad/nimh	59.99
MHS-C800U	External charger pin shell .....	4.99
MHS-C801	Cup; T2/W32/TH22/79/FT10/50	7.99
MHS-C802	Cup; IC02AT/TH78/TA740/530 .....	7.99
MHS-C803	Cup; Kenwood TH-7D/A/G71A .....	7.99
MHS-C804	Cup; lcom IC-78A/781A .....	7.99
MHS-C805	Cup; Yaesu FT-11/41/51R .....	7.99
MHS-C806	Cup; Ali 195/580/F1/G5/V5/etc	7.99
MHS-DC-777	Cig lighter cord .....	5.99
MH-101-11	Cgr/bol/5160V/741312/Mah 13B/GD	4.99
MH-101-Y1	Cgr; Yae 101/112/25/27/Mah 12/27	6.99
MH-101-Y2	Cgr; Yae FNB31/38/Mah MHFNB38 D	6.99
MH-800K	500mw sprk/mic w/clip; Kenwood .....	19.99
MH-800S	500mw sprk/mic/clip; Ali/Lco/Sta/Yae	19.99
MH-800Y	500mw sprk/mic; Yae FT50/X1R .....	24.99
MHS-11	lco 2G/02/2/32 adapt; A301/302 .....	..99
MHS-12	lco 2SAT/W2 adapt; A301/302 .....	..69
MHS-13	lco 2GXAT/W21AT adapt; A301/302 D	..99

## Maha - continued AES Price

MHS-15	lco 78A/781A adapter; A301/302 .....	2.99
MHS-K1	Ken 25/26/75/77 adapt; A301/302 .....	..99
MHS-K2	Ken TH22/79 adapter; A301/302 .....	..99
MHS-K3	Ken G71A/D7A adapt; A301/302 .....	2.99
MHS-S1	ADI/Standard adapter; A301/302 .....	..99
MHS-Y1	Yae 23/41/E/470 adapt; A301/302 .....	..99
MHS-Y2	Yae 26/41/530 adapt; A301/302 .....	..99
MHS-Y3	Yae FT11/41/51 adapt; A301/302 .....	..99
MHS-Y4	Yae FT10/40/50 adapt; A301/302 .....	..99

## MALDOL (MAL)

AH-14	20m telescoping ant w/BNC; FT-817 ...	\$ 45.99
AH-28	10m telescoping ant w/BNC; FT-817 ...	45.99
AH-C7	40m loading coil only w/BNC; FT-817	33.99
AH-C14	20m loading coil only w/BNC; FT-817	33.99
AH-C21	15m loading coil only w/BNC; FT-817	33.99
AH-C28	10m loading coil only w/BNC; FT-817	33.99
AH-R	Telescoping whip for AH-C7/14/21/28	17.99
AH-510R	6/2m/440 37" BNC tele whip; FT-817/H	59.99
AH-510R/SMA	6/2m/440 37" SMA tele whip .....	59.99
AS-20	2m/440 8.5" superflex SMA antenna .....	29.99
AS-25	2m/440 1" SMA antenna .....	19.99
AS-30	2m/440 15" 0/2.15db superflex SMA ant	29.99
AX-50	2m/440 0/5db 21" mobile antenna .....	46.99
AX-75	2m/440 3.2/5.7db 30" mobile ant .....	54.99
AX-85	2m/440 3.3/5.8db 38" mobile ant .....	59.99
EM-B80	Small trunk/hatch/van door lip mt .....	25.99
EX-104B	2m/440 black 0/2.15db 15" mob .....	41.99
EX-104BNMO	2m/440 blk 0/2.15db 15" NMO .....	39.99
EX-107RB	2m/440 black 2.6/4.9db 29" mob .....	52.99
EX-107RBNMO	2m/440 blk 2.6/4.9db 29" NMO .....	52.99
EX-510B	6m/2m/440 blk 0/2.15/5.5db 37" mob	62.99
EX-510BNMO	6m/2m/440 blk 0/2.15/5.5db 37" NMO	62.99
FVS-50	Dlx 2-step 16" 9" cable w/UHF connects	39.99
HV0-8	80/40/20/15/10/6/2m 8.6" vert w/radials	319.99
HMC-6S	20/15/10/6/2m/440 68" mobile ant .....	149.99
HMC-7C	40m loading coil for HMC-6S .....	34.99
MH-209	2m/440 3" BNC duck .....	23.99
MH-209SMA	2m/440 3" SMA duck .....	23.99
MH-510	6m/2m/440 0/0.3/2db 20.75" SMA duck	37.99
MH-511	6m/2m/440 4.25" SMA duck .....	33.99
MH-610	2m/220/440 1/4/8.3/2db 14" SMA duck	49.99
MK-30H	Motorized tnlk/hatch/van door mt .....	104.99
MSG-1000C	2m/440 2.15/5.5db 39" mobile D .....	39.99
PR-212DNMO	2m/440 6/8.5db 85" NMO mob D .....	79.99
PRM-T	Large trunk/hatch/van door lip mt .....	29.99
SHG-140B	2m 4.1db 56" mobile antenna .....	49.99
SHG-140BNMO	2m 4.1db 56" NMO mob ant .....	49.99
SHG-1500B	2m/440 blk 4.5/7.5db 59" mob .....	59.99
SHG-1500BNMO	2m/440 blk 4.5/7.5db 59" NMO D .....	49.99

## MAXON (MAX)

MX-49FX	5 ch 49 MHz ear mic Xcvr .....	\$ 49.99
MX-49SX	49 MHz boom mic/headset Xcvr .....	29.99

## MEADE (MEA)

0705-04-01	ETX-70AT Astro telescope w/tripod .....	\$319.99
07025	#882 Extra std tripod .special order	99.99
07027	#884 Deluxe tripod .....	199.99
07137	1.25" 5mm Plossl lens .....	59.99
07139	1.25" 18mm WA lens .....	69.99
07170-02	1.25" 6.4mm super Plossl lens .....	89.99
07173-02	1.25" 15mm super Plossl lens .....	89.99
07220	#933 45° 1.25" erecting prism .....	69.99
07273	#126 1.25" 2x short-focus Barlow lens	59.99
07279	#670 dew shield .....	19.99
3514-03-20	ETX-90AT Astro tele/ctrlr/tripod .....	599.99
0515-03-20	ETX-125AT Astro tele/ctrlr/tripod .....	999.99
07137	1.25" 5mm Plossl lens .....	59.99
07139	1.25" 18mm WA lens .....	69.99
07170-02	1.25" 6.4mm super Plossl lens .....	89.99
07173-02	1.25" 15mm super Plossl lens .....	89.99
07273	#126 1.25" 2x short-focus Barlow lens	59.99

## Meade - continued AES Price

07217	#928 45° 1.25" erecting prism; DSX/70/90 .....	49.99
07436	#497 Autostar controller; ETX-125EC .....	119.99
494	#494 Autostar controller; DS-EC-series .....	19.99
20117	DS-2114ATS 114mm reflector telescope .....	399.99
20201	NGC-60 60mm refractor telescope .....	199.99
07137	1.25" 5mm Plossl lens .....	59.99
07139	1.25" 18mm WA lens .....	69.99
07170-02	1.25" 6.4mm super Plossl lens .....	89.99
07173-02	1.25" 15mm super Plossl lens .....	89.99
07273	#126 1.25" 2x short-focus Barlow lens	59.99
07522	908B broadband nebula filter .....	59.99

## MIDLAND (MID)

22-410	Speaker/mic for 75-510XLB .....	\$ 2.99
23-505	1.5-150MHz dual meter SWR/power .....	19.99
74-200	SAME weather/hazard alert radio/ps .....	49.99
WR-30	FM/SAME weather/hazard alert radio/ps D	44.99
WR-300	AM/FM/SAME WX/hazard alert radio/ps	49.99

## Miracle Antenna (MIA)

Miracle Whip	3.5-450MHz 57" QRP ant/tuner	\$119.99
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## MIRAGE (MIR)

A-1015G	50-52 FM/SSB 10/150w amp/preamp	\$349.99
B-34	2m FM 2/35w amplifier; no mob bkt .....	69.99
B-34G	2m FM/SSB 3.5/35w amp/preamp .....	89.99
B-310G	2m FM/SSB 4/100w amp/preamp .....	179.99
B-320G	2m FM/SSB 50/200w amp/preamp .....	429.99
B-1018G	2m FM/SSB 10/160w amp/preamp .....	369.99
B-2518G	2m FM/SSB 25/160w amp/preamp .....	299.99
B-2530G	2m FM/SSB 25/300w amp/preamp .....	689.99
B-5018G	2m FM/SSB 50/160w amp/preamp .....	299.99
B-5030G	2m FM/SSB 50/300w amp/preamp .....	669.99
BD-35	2m/440 4/45/4/35w HT amp .....	149.99
BD-38/BD-38G	2m/440 4/80w HT amp/preamp .....	279.99
B-24G	5/50w 2m HT dock boost amp/pre .....	109.99
BD-25	5/45/5/35w 2m/440 HT dock boost .....	164.99
MI-1	lco 2G/02/2/23 adapter; B24G/BD25 .....	9.99
MI-2	lco 2SAT/W2 adapter; B24G/BD25 .....	9.99
MI-3	lco 2GXAT/W21AT adapt; B24G/BD25 .....	9.99
MK-1	Ken 25/26/75/77 adapt; B24G/BD25 .....	9.99
MK-2	Ken 22/79 adapter; B24G/BD25 .....	9.99
MS-1	ADI/Standard adapter; B24G/BD25 .....	9.99
MY-1	Yae 23/41/E/470 adapt; B24G/BD25 .....	9.99
MY-2	Yae 26/41/530 adapt; B24G/BD25 .....	9.99
MY-3	Yae FT11/41/51 adapt; B24G/BD25 .....	9.99
MY-4	Yae FT10/40/50 adapt; B24G/BD25 .....	9.99
C-22G	220 FM/SSB 2/20w amp/preamp .....	154.99
C-211G	220 FM/SSB 2/110w amp/preamp .....	329.99
C-1012G	220 FM/SSB 10/120w amp/preamp .....	329.99
C-1022G	220 FM/SSB 10/220w amp/preamp .....	689.99
C-2512G	220 FM/SSB 25/120w amp/preamp .....	309.99
C-5022G	220 FM/SSB 50/200w amp/preamp .....	369.99
D-15N	430 FM/SSB/ATV 2/15w type N amp .....	169.99
D-26N	440 FM/SSB 2/60w type N amplifier .....	259.99
D-1010N	440 FM/SSB 10/100w type N amp .....	379.99
D-3010N	440 FM/SSB 30/100w type N amp .....	349.99
D-1010-ATVN	430 ATV 10/100w type N amp .....	399.99
RC-1*	Remote control head w/18" cable .....	45.99
*Not for B-23/C-22/D-26		
RC-2	Rem ctl head/cable; B-XX18G .....	45.99

The following Repeater Amplifiers are Special Order. Specify SO-239 or type N connectors

A-1015NR	6m FM 2/80w type N amplifier .....	\$549.99
A-1015NR	6m FM 2/80w SO-239 amplifier .....	529.99
C-211NR	220 FM 5/80w type N amplifier .....	619.99
C-211R	220 FM 5/80w SO-239 amplifier .....	599.99
C-1012NR	220 FM 5/90w type N amplifier .....	619.99
C-1012R	220 FM 5/90w SO-239 amplifier .....	599.99
C-2512NR	220 FM 15/90w type N amplifier .....	589.99
C-2512R	220 FM 15/90w SO-239 amplifier .....	569.99



Mirage - continued AES Price

D-1010NR	440 FM 4/80w type N amplifier	629.99
D-3010NR	440 FM 12/80w type N amplifier	599.99
D-1010-ATVN-R	430 ATV 4/80w type N amp	629.99

<b>PREAMPS</b>		
KP-1/10M	10m in shack preamp	119.99
KP-1/6M	6m in shack preamp	129.99
KP-1/2M	2m in shack preamp	129.99
KP-1/220	220 in shack preamp	119.99
KP-1/440	440 in shack preamp	129.99
KP-2/10M	10m mast mount preamp	129.99
KP-2/6M	6m mast mount preamp	179.99
KP-2/2M	2m mast mount preamp	179.99
KP-2/220	220 mast mount preamp	139.99
KP-2/440	440 mast mount preamp	179.99

<b>WATTMETER</b>		
MP-3	420-450 5/50/150w PEP wattmeter	229.99

<b>MOTOROLA (MOT)</b>		
50226	Headset w/mic for older FRS	9.99
53834	Rosewood TS200 Alkaline FRS	29.99
53725	Headset w/microphone	14.99
T-4500-2	22ch 500mw GMR/FRS handheld .pair	29.99
T-5950-2/AA	22 ch 1w GMR/FRS HH	79.99

<b>NCG (NCG)</b>		
Power Pocket	12v 2AH lead acid belt batt/cgr	66.99

<b>NCS (NCS)</b>		
NCS-3230	Multi-receiver receive console	349.99
NCS-1514	Wall power supply; NCS-3230	24.99
NCS-P2P35-A	Multi-rx/spkr out set 6 cables	42.99
NCS-MRX2MS-A	3240 & 3230 interface cbl kit	49.99
NCS-3240	Multi-switcher audio device	299.99
NCS-1512	Wall power supply; NCS-3240	12.99
NCS-LoZNC	Unterminated interface cable	17.99
NCS-LoZ8PI-I	Icom 8-pin interface cable	24.99
NCS-LoZRJ45-I	Icom modular interface cable	23.99
NCS-LoZ8PI-K	Kenwood 8-pin interface cable	24.99
NCS-LoZRJ45-K	Kenwood modular interface cbl	23.99
NCS-LoZ8PI-Y	Yaesu 8-pin interface cable	24.99
NCS-LoZRJ12-Y	Yaesu modular interface cbl	23.99
NCS-3400	Multi-patch audio patch panel	129.99

<b>Night Owl Optics (NOO)</b>		
NOCC-3	3.1x42 night vision scope w/illuminator	139.99
NOCA-42	Camera adapter	39.99
NOLD-20	Lens doubler	39.99
NODS-5	5x48 night vision scope w/illuminator	249.99
NOCA-42	Camera adapter	39.99
NOXG-2	3x G2 night vision scope w/illuminator	899.99
NOCA-42	Camera adapter	39.99

<b>NORCOMM (NOR)</b>		
NC-101	Tunable CTCSS encoder	21.99
NC-104	Programmable CTCSS encoder	26.99
NC-106	Prog CTCSS encoder/decoder	62.99
NC-401	Sub-miniature DTMF decoder	62.99

<b>Oregon Scientific (ORE)</b>		
EMR-812A	Wireless thermometer	29.99
THR-138	Extra wireless sensor; EMR-812A	24.99
PE-319	Pedometer with personal security	19.99
RGR-122	Wireless rain gauge w/LCD console	59.99
RM-116E	Exactest clock controlled clock	29.99
WMR-112A	Wireless weather station	199.99
WM-918	Dlx weather station w/rain gauge	229.99
WMR-968	Dlx wireless WX stn w/rain gauge	399.99
WR-102	Port WX/hazard radio/SAME alert	49.99
WR-196T	AM/FM/SAME WX alert clock radio	69.99

<b>OUTBACKER (OUT)</b>		
OB-8	75-10m 300w PEP 6' 8-band mobile ant	279.99
OB-8HP	75-10m 500w PEP 6' 8-band mob ant	299.99

<b>Outbacker - continued AES Price</b>		
OB-S8	75-10m 300w PEP split ant/storage bag	299.99
OB-8TRI	75-10m 300w PEP 3pc 6' port ant/bag	329.99
Joey	80-2m 20w antenna w/counterpoise	249.99
(ALP) MicroMount	Tripod system for Joey	49.99
OB-M	75/40/20/17/10m/HF marine 300w PEP 6'	399.99
Perth	75-10m 150w PEP 7.5' mobile ant	289.99
Perth Plus	75-10m+6m/2m 150w PEP 6' mob ant	299.99
Stealth Plus	75-10m+6/2m 100w PEP 4' ant	269.99
Outreach	160-10m 300w PEP 12' antenna	399.99
Outreach 500	80-6m 600w PEP 12' antenna	439.99
(ALP) Outpost	Base tripod mtg sys for mob ant	199.99
OB-SB	3/4-24 spring and 1/2" hole base	99.99
Diamond K-400-3/8C	3/4-24 trunk mt, 6' coax	69.99
Diamond C-110	10' ext cable; K-400-3/8C	14.99

<b>PACCOM (PAC)</b>		
Spirit-2	Std high performance controller	199.99
<b>Palomar Engineers (PAL)</b>		
MSB-3	Magnetic switch receive balun	9.99
PT-340	Tuner-Tuner (use with ant tuner)	99.99
RFI-4	RF interference kit	25.99
SMB-5	SmartBridge prog; AT computers	19
VLF-A	VLF converter; 10-500 KHz to 80m	99.99
VLF-S	VLF conv; 10-500 KHz to 4-4.5 MHz	99.99

<b>PAR (PAR)</b>		
OA-28	10m horizontal omni antenna	74.99
OA-50	6m horizontal omni antenna	69.99
SK-50	Stacking harness for OA-50	36.99
OA-144	2m horizontal omni antenna	54.99
SK-144	Stacking harness for OA-144	34.99
OA-222	220 horizontal omni antenna	54.99
SK-222	Stacking harness for OA-222	14.99
OA-432	430 horizontal omni antenna	54.99
SK-432	Type N stacking harness; OA-432	54.99
SM-50	6m 2el stressed moxon 5.8db beam	79.99
UHFND450	440 dual band notch filter	69.99
VHFDN152	2m dual band notch filter	69.99
VHFDN152HT	2m dual band HT notch filter	68.99
VHFTN152-158	2m dual band+pager notch filt	82.99
UHF-12	12" RG58/silver/gold/tef PL259s	9.99

<b>PENETROX (PEN)</b>		
Penetrox A	4 oz tube for antennas	12.99
<b>POLICE CALL (POL)</b>		
Vol 3/4 2003	IL/IN/KY/MI/OH/WI book/48 state CD	19.99
Vol 5/8 2003	AZ/CO/IA/NV/others book/48 state CD	19.99

<b>POLYPHASER (PLY)</b>		
<b>LIGHTNING PROTECTION</b>		
IS-50NX-C2	125-1000 375/125/50w N flange	61.99
IS-50UX-C0	1.5-400 2kw/375/125w flange mt	61.99
IS-50UX-C1	50-700MHz 375/125w flange mt	61.99
IS-B50LN-C2	125-1000 375/125/50w N bulkhead	64.99
IS-B50LU-C0	1.5-400 2kw/375/125w bulkhead	64.99
IS-B50LU-C1	50-700 375/125w bulkhead mt	64.99
IS-IE50LU-C0	1.5-400 dx 2kw/375/125w bulk	119.99
IS-IE50LU-C1	50-500 dx 375/125w bulkhead	49.99
IS-IE50LN-C1	50-700 dx 375/125w N bulkhead	109.99
BF Adapter	Bulkhead to flange mt adapter	9.99
FB Adapter	Flange to bulkhead mt adapter	11.99
IS-PLD0-120-15A	120v 15A power protector	159.99
IS-PLD0-120-20A	120v 20A power protector	199.99
IS-RCT	8-wire rotor control protector	54.99
J-1	1/2" to 1/8" bronze transition clamp	8.99
J-2	1 1/2" to 2 1/4" bronze transition clamp	12.99
IS-SPILT	Single phone line protector	57.99
CS112-25	25' 1 1/2" copper strap	25.99
CS112-50	50' 1 1/2" copper strap	49.99
CS112-75	75' 1 1/2" copper strap	74.99

<b>Polyphaser - continued AES Price</b>		
CS112-100	100' 1 1/2" copper strap	99.99
CS3-25	25' 3" copper strap	49.99
CS3-50	50' 3" copper strap	99.99
CS3-75	75' 3" copper strap	139.99
CS3-100	100' 3" copper strap	159.99
CU-SPGP	Copper single point ground panel	69.99
TK-2	1 1/2" strap to Rohn trw corrosion free clamp	5.99
TK-3	1 1/2" strap-2 1/4" to 3 3/4" mast corr free clamp	8.99
1C-112S	#6-#1 wire to 1 1/2" strap clamp bond	10.99
58R-112S	1 1/2" strap to 3/8" gnd rod clamp bond	12.99
MSC-3	Junc; 2+ 1 1/2" or 3" strap clamp bond	10.99
UNI-KIT 2CT	Gnd kit; coax to alum/tin/galv	29.99
UNI-KIT 2TC	Gnd kit; galv tw leg to copper	32.99
UNI-KIT 2CC	Ground kit; coax to copper	28.99
CCK	Copper cleaning kit; 4 oz can, brush	27.99
GLEP	Lightning and EMP Protection book	20.00

<b>Power Port (See Cutting Edge) PREMIER (PRE)</b>		
AL-800	2m/440 34" BNC rubber duck ant	29.99
RD-2	2m/440 2" BNC duck	14.99
RD-2SMA	2m/440 2" SMA duck	15.99
RD-8	2m/440/900 6.5" BNC duck	14.99
RD-9	2m/440/900 7" BNC duck	18.99
RD-9SMA	2m/440/900 7" SMA duck	20.99
RD-78	2m/440/900 15" BNC whip	19.99
RD-98	2m/440 17" BNC whip	24.99
RD-98SMA	2m/440 17" SMA whip	27.99
SPM-100	Spkr/mic; ADI/Alinco/Icom/Yaesu	27.99
SPM-101	Spkr/mic for Kenwood	27.99
SPM-102	Spkr/mic; Yaesu FT-50R/VX-1R/5R	27.99
SPM-400A	Boom/mic; ADI/Alinco/Icom/Yaesu	37.99
SPM-402A	Boom mic; Yae FT-50R/VX-1R/5R	37.99
PCA-YHF	Cable/8-pin; Yaesu HF	9.99
PCA-YVHF	Cable/modular; Yaesu VHF	9.99

<b>PRO AM by VALOR (VAL)</b>		
<b>VHF/UHF ANTENNAS ONLY (No Mounts)</b>		
MO144-440	2m/440 antenna only	21.99
PAQA	136-515 MHz 1/2" wave antenna only	8.99
PHB-144	2m 3/4" wave 3 db antenna only	29.99
<b>MOUNTS ONLY FOR ABOVE ANTENNAS</b>		
PAM	Low profile magnet mount w/coax	24.99
PAMB	Black low profile mag mount w/coax	24.99
PAN38	3/8-24 antenna to NMO mt adapter	14.99
PAS 3/8"	surface mount w/coax	19.99
PASMO 3/8"	surface mt only (no coax)	7.99
PAS38 3/8"	surface mount w/coax	9.99
PAT-2	No hole trunk mount w/coax	19.99
PAT-2B	Black no hole trunk mount w/coax	19.99

<b>OTHER VHF/UHF ANTENNAS &amp; MOUNTS</b>		
100ADN	SD-239 horizontal mirror mt	10.99
101ADN	HD alum mirror mt w/SD-239	10.99
105AD	Hvy duty 3/8" mount assembly	6.99
105HD	Heavy duty mount assembly	3.99
301	4" low profile 3/8-24 magnet mt w/coax	16.99
401	5" low profile 3/8-24 magnet mt w/coax	19.99
BNC-SC-RS	Suction cup extension; ducks	14.99
DAK	Mt for 2 vert ants or horizontal dipole	13.99
GM-144	2m 2.5db on glass antenna	29.99
GM-270	2m/440 2.6/6.3db on glass antenna	59.99
TGMKD	On glass replacement mtg kit	8.99
MM-3401	Maxi-mag mt 3/8-24 kit (3-5" mags)	59.99
MM-3401B	Blk mag mt 3/8-24 kit (3-5" mags) D	59.99
SS-100MOT	3-way NMO mirror mt w/coax	23.99
CX-144	2m 3/4" wave 3db 3/4-24 whip	17.99
MM-270B	2m/440 mini mag mt ant w/BNC	19.99
PM-144-440BN	2m/440 BNC mag mt ant	29.99
TGS	30-1200MHz on-glass scanner ant	39.99
VAA-002B	144-440 6 1/2" wv mag mt ant	23.99



## Pro Am - continued AES Price

VAA-002BBN	144-450 black ¼ wv BNC mag ant	27.99
120	Sawtooth hump mt for mobile radios	7.99
D-270	2m/440 100w duplexer	39.99

## MOBILE HF ANTENNAS (No Mounts)

AB-5	75/40/20/15/10m antenna	\$119.99
PHF-16D	160m 8' ¾-24 whip	89.99
PHF-75	75m 8' ¾-24 whip (4' coil, 4' whip)	29.99
PHF-40	40m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-30	30m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-20	20m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-17	17m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-15	15m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-12	12m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-10	10m 8' ¾-24 whip (4' coil, 4' whip)	23.99
PHF-6	6m 58" ¾-24 whip	23.99
103S	Quick disconnect/5 twist lock connectors	24.99

## QRZ (WAL)

Ham QRZ US & international calls plus programs \$29.99

## QSL Card Holders (ART)

QSL Card Holders, pack of 3, 20 cards/holder \$18.99

## QUEST (QUS)

1004	Astra 1 hobby rocket kit	\$ 6.99
1014	Big Betty hobby rocket kit	9.99
2001	Evader cruise missile kit	7.99
5721	Cyclone RTF rocket kit	10.99
5740	A6-4 motor flight pack (3)	5.99
5743	C6-3 motor flight pack (3)	6.99
5744	C6-5 motor flight pack (3)	6.99
7010	TigerTail II igniters (6)	2.99
7021	Recovery wadding (100 sheets)	2.99
7700	Complete launch system	14.99

## RCA (RCA)

108	F-56 connector w/o-ring for TV coax	\$ 4.99
AH-19	6' audio cable w/RCA plugs	2.99
AH-211	25' audio cable w/RCA plugs	6.99
ANT-120	VHF TV/UHF TV/FM indoor antenna	19.99
RP-3710	AM/FM clock radio	24.99
TA-25	25db VHF/UHF TV/FM distribution amp	19.99
VH-84	6' audio/video cable w/gold RCA plugs	5.99

## RF INQUIRY (RFI)

CF250E-UHF	250w 1.8-70 common mode filter	\$89.99
CF55K-UHF	5kw 1.8-70 common mode filter	124.99

## RF PARTS (See Diamond)

## RAMSEY (RAM)

AA-7	Active antenna kit	\$34.99
AR-1	Aircraft receiver kit	34.99
CW-7	CMOS keyer kit	24.99
DF-1	Foxhound direction finder kit	69.99
FR-1	FM broadcast receiver kit	29.99
HR-20	20m receiver kit	34.99
HR-40	40m receiver kit	34.99
QRP-20	20m CW transmitter kit	34.99
QRP-40	40m CW transmitter kit	34.99
RFS-1	RF sensed switch kit	19.99
SCA-1	SCA decoder kit	34.99
SR-2	Shortwave receiver kit	39.99
TS-1	CW touch paddle switch kit	6.99
UT-5	Universal timer kit	9.99
VS-1	Voice activated switch kit	9.99

## RANGER (RAN)

RCL-2950DX	10/12m 25w SSB/10w FM/AM/CW	\$269.99
RCL-2970DX	10/12m 150w SSB/50w FM/AM/CW	399.99
RCL-5054DX	6m 25w SSB/10w FM/AM/CW	269.99

## SGC (SGC)

04-01	SG-2000 150w 1.8-30 MHz 12v Xcvr	1569.99
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## SGC - continued AES Price

04-11	Std SG-2000 rem head/bkt/20' cable	589.99
04-15	Remote mobile head/mem ch's only	449.99
51-82	Fan kit for continuous duty xmit	269.99
04-10	SG-2000 Xcvr w/DSP/PowerTalk head	1849.99
04-23	SG-2000 Xcvr/DSP/PowerTalk remotd	2099.99
52-34	RS-232 interface; SG-2000 Xcvr	129.99
52-51	CA-1 High voltage feed wire Δ, per ft.	29
52-54	CA-2000 Rem head cable Δ, per ft.	1.99
53-04	PS-30 30A/40A peak unreg ps	319.99
53-05	PS-50 50A/70A peak unreg ps	419.99
52-61	PSC/12-1 12' ps cable, 1 plug Δ	39.99
52-62	PSC/12-1 12' ps cable, 2 plugs Δ	49.99
05-01	SG-2020 Mini 20w PEP QRP Xcvr/mic	669.99
05-04	SG-2020 Mini 20w PEP QRP Xcvr/mic/ADSP2	789.99
54-22	SG-239 200w Smarttuner	179.99
52-96	SG-500 1.8-24MHz 12v 500w PEP amp	1249.99
51-82	Fan kit for continuous duty xmit	269.99
54-14	SG-230 200w 1.8-30 MHz 12v Smarttuner	489.99
54-61	25' extension cable	60.99
54-62	50' extension cable	90.99
54-63	SmartLock; tuners made after 9/1/93	59.99
54-15	SG-235 500w 1.8-30MHz 12v Smarttuner	1169.99
54-17	SG-231 HF-6m 12v Smarttuner	529.99
54-18	SG-237 100w PEP HF-6m mini Smarttuner	359.99
54-19	SG-237 PCB only 100w PEP Smarttuner	249.99
54-22	SG-239 200w Smarttuner	179.99
54-23	Stealth Kit SG-237 w/loop antenna	399.99
54-25	MAC-200 Smarttuner/ant switch combo	359.99
55-04	SG-103 2-28 MHz 90' 150w dipole Δ	199.99
55-06	SG-104 2-28 MHz 90' 1kw dipole	599.99
55-27	SG-303 1.8-30 9' mobile whip & mt.	449.99
55-67	Replacement whip for SG-303	249.99
55-28	SG-307 1.8-60 7' mobile whip & mt.	449.99
55-47	QMS-2 Quick mt sys w/SG-230/303 whip	894.99
55-48	QMS-3 500w antenna system	1999.99
55-49	QMS-7 Quick mt sys w/SG-231/307 whip	1199.99
55-50	QMS-37 Quick mt sys/SG-237, less whip	549.99
70-14	ADSP2 DSP noise reduction speaker	129.99

## SAMLEX (SAM)

SEC-1223	23A switching ps w/fan, 24A surge	\$ 99.99
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## SANGEAN (SAN)

ATS-404	AM/FM/SW portable receiver w/case	\$ 79.99
ATS-505P	AM/FM/SW portable receiver	129.99
ATS-606A	AM/FM/shortwave portable receiver	139.99
ATS-818	AM/FM/shortwave portable Rcvr	179.99
ATS-818CS	AM/FM/SW port Rcvr w/cassette D	219.99
ATS-909	AM/FM/shortwave portable Rcvr	249.99
DT-200V	AM/FM/VHF TV sound dig port Rcvr	69.99

## SEQUIA (SEQ)

POCKET PC REF	Pocket PC reference book	\$ 14.99
POCKET REF	Pocket reference book	12.99
WinRef 98-95	Windows pocket reference book	9.99

## SHAKESPEARE (SHA)

396-1	3 db, 5' VHF marine ant, less mount	\$ 59.99
5101	6 db, 8' VHF marine ant, less mount	49.99
5202	6db 8' VHF mar ant/chrome ferrule, less mt	69.99
5206-C	Econo 8' VHF mar ant/chrome ferrule, no mt	39.99
495	White plastic lift & lay mount	14.99
4187	Stainless steel ratchet mount	36.99
420	3db, 5' VHF marine ant w/fold-down mt	59.99

## Smiley Antenna (SMI)

270A	2m/440 gain telescopic whip	\$ 19.99
270A/SMA	2m/440 gain tele whip w/SMA	19.99
5/8 SLD-2	2m ¾ Slim Duck rubber ant	17.99
5/8 SLD-220	220 ¾ Slim Duck rubber ant	17.99
5/8 SLD-440	440 ¾ Slim Duck rubber ant	17.99
5/8 SLD-2 Combo	2m ¾ duck & stubby ant	24.99
5/8 SLD-220 Combo	220 ¾ duck & stubby ant	24.99

## Smiley - continued AES Price

5/8 SLD-440 Combo	440 ¾ duck & stubby ant	24.99
FLX 1/2 WAV-2M	½ wv 2m BNC whip/flex coil	25.99
RD-2	2m rubber duck antenna	14.99
RD-220	220 rubber duck antenna	14.99
RDMO-2	2m mini rubber duck antenna	14.99
RDMO-220	220 mini rubber duck antenna Δ	7.99
RDMO-440	440 mini rubber duck antenna	14.99
RDS-2	2m stubby rubber duck antenna	14.99
RDS-220	220 stubby rubber duck antenna	14.99
RDS-440	440 stubby rubber duck antenna	14.99
SD-2	2m Slim Duck thin rubber antenna	14.99
SD-220	220 Slim Duck thin rubber antenna	14.99
SL-440	440 slimline type duck	12.99
SS-II	Super Stick 2m ¾ wv telescopic ant	19.99
SS-III	Super Stick 220 ¾ wv telescopic ant	19.99
SS-IV	Super Stick 440 ¾ wv telescopic ant	19.99
SS-II/Combo	2m ¾ wv telescopic & stubby ant	26.99
SS-III/Combo	220 ¾ wv telescopic & stubby ant	26.99
SS-IV/Combo	440 ¾ wv telescopic & stubby ant	26.99
TAQ-2	2m ¾ wave stainless whip	10.99
TAQ-220	220 ¾ wave stainless whip	10.99
TAQ-440	440 ¾ wave stainless whip	10.99
TS	Thin Stick 2m/220 ¾ wave telescopic whip	16.99

## SOLARCON (SOL)

A-99	10m/CB 17' 8" fiberglass base ant	\$ 64.99
6PK-1	Ground plane radial kit	39.99

## SONY (SON)

### SHORTWAVE

ICF-SW07	AM/FM/SW micro Rcvr w/ps	\$399.99
ICF-SW11	AM/FM/SW compact receiver	49.99
ICF-SW12	AM/FM/SW travel Rcvr/world clock	89.99
ICF-SW35	AM/FM/SW portable receiver	89.99
ICF-SW40	AM/FM/SW port receiver	119.99
ICF-SW77	AM/FM/SW portable receiver	469.99
ICF-SW100S	AM/FM/SW portable receiver	349.99
ICF-SW1000T	AM/FM/SW port Rcvr/cassette	399.99
ICF-SW7600GR	AM/FM/SW portable receiver	179.99
AN-1	1W/MW/SW indoor/outdoor active rcv ant	99.99
AN-102	1W/MW/SW indoor active rcv ant	79.99
AN-LP1	Folding active loop ant w/case	89.99
DCC-E260	Mobile DC adapter; ICF-SC1	9.99

## Super Antennas (SUA)

MP-1	Portable 150w 7-50MHz antenna	\$129.99
FT817MKT	MP-1 mounting bkt for FT-817 Δ	14.99
MBKT	MP-1 mob kit (4' whip & 2' base rod) Δ	9.99
MP-80	80m coil for MP-1	19.99
TRPD	Tripod for MP-1	19.99

## SUPERIOR (SUP)

18640	Universal grip-type adjustable HT cradle	\$ 14.99
(HOU) CPM-310	6" adjustable pedestal mt	14.99

## Synthetic Textiles (SYN)

100' ¾"	black double braided rope	\$ 7.99
100' 3/16"	black double braided rope	16.99
100' 5/16"	black double braided rope	22.99
350' ¾"	black double braided rope	44.99

## TV GUARDIAN (TVG)

TV Guardian	Foul language filter for TV/video	\$89.99
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## Terk Technologies (TER)

AF-9330	Indoor AM/amplified FM tower ant	\$ 24.99
AF-9255	Indoor AM/amplified FM loop ant .D	39.99
AM-1000	Indoor passive fine-tunable AM ant	49.99
FM-50	Amplified indoor/outdoor FM ant kit Δ	49.99
LF-20S	2.4GHz wireless video/audio system	79.99
LF-1RX	Remote control extender	39.99
LF-30S	2.4GHz wireless vid/aud/sys/rem features	99.99
MDD-41	Deluxe RF modulator/switch	39.99



## Terk - continued

PI-8 Indoor AM/amplified FM loop ant .....	49.99
TSP-6 AC/TV/telephone surge protector .....	29.99
TV-42 Clip-on mini dish mt amp TV ant; 2 LNB dish .....	59.99
TV-55 Indoor/outdoor TV antenna .....	89.99
TV-MAST TV antenna mast mount kit .....	2.99
VR-1 TV volume regulator .....	49.99
V54-MDD Deluxe 4 input RF modulator/switch .....	49.99

## Times Microwave (TMS)

LNR-400 Standard 3/4" coax cable .....	per ft. \$ .64
LNR-400 .....	500 ft. Roll 249.99
LNR-400-DB Watertight 3/4" coax cable per ft. ....	.74
LNR-400-DB .....	500 ft. Roll 299.99
LNR-400-UF UltraFlex 3/4" coax cable .....	per ft. .98
LNR-400-UF .....	500 ft. Roll 399.99

## TIMEWAVE (TIM)

ANC-4 RF noise canceller .....	\$209.99
AC-1 12vdc 600 ma adapter .....	15.99
AC-5 12vdc 1.7A desktop ps .....	24.99
DSP-599zx All-mode DSP noise filter .....	436.99
AC-5 12vdc 1.7A desktop ps .....	24.99
DSP-RTTY RTTY prog; DSP-599zx/59Y .....	19.99
PK-96/100K 9600 baud controller/128K RAM .....	219.99
(CSS) PK-Term 99 Terminal prog; PK-96/232 .....	79.99
AC-1 12vdc 600 ma adapter .....	15.99
AC-5 12vdc 1.7A desktop ps .....	24.99
PK-232/PSK Multimode controller w/sound card .....	531.99
(CSS) PK-Term 99 Terminal prog; PK-96/232 .....	79.99
AC-5 12vdc 1.7A desktop ps .....	24.99
HSC-99 HamHub station controller .....	349.99

## TRAXXAS (TRX)

2410 Bandit RTR electric buggy w/TQ radio ..	\$129.99
3606 Stampede RTR electric monster truck w/ESC ..	174.99
3706 Rustler RTR electric stadium truck w/ESC ..	154.99
3710 Rustler RTR electric stadium truck w/TQ Tx ..	134.99
3906 E-Maxx RTR electric monster truck .....	334.99

## TRIPP LITE (TRI)

PV-140 140w 12vdc-115vac inverter .....	D \$ 39.99
PV-150 150w 12vdc-115vac inverter .....	42.99
PV-300 300w 12vdc-115vac inverter .....	D 59.99
PV-375 375w 12vdc-115vac inverter .....	65.99
ISOBAR-8 ULTRA 8 outlet surge suppress/LEDs ..	79.99
SUPER-7 7 outlet surge suppressor .....	19.99
SUPER-7+TEL 7 outlet/fax modem surge .....	29.99

## TUBES (TUB)

6146W Tube .....	\$ 26.99
12BY7A Tube .....	12.99
3-500Z6-RFP High dissipation tube (3-500Z) ..	149.99
3-500Z .....	199.99
572B Tube .....	49.99
811A Tube .....	19.99

## US TOWER (UST)

### FREE STANDING CRANK-UPS (not for T'X)

TX-438 38' crank-up tower .....	T 979.99
TX-455 55' crank-up tower .....	T 1579.99
TX-472 72' crank-up tower .....	T 2459.99
TX-472MDP 72' crank-up w/motor drive .....	T 3999.99
TX-489MDPL 89' crank-up w/motor drive .....	T 6429.99
TX-3106MDPLSP 106' crank-up/mot drive .....	T 11699.99

### FREE STANDING HD CRANK-UP TOWERS

HDX-538 38' crank-up tower .....	T 1269.99
HDX-555 55' crank-up tower .....	T 2269.99
HDX-572MDPL 72' crank-up w/motor drive .....	T 5899.99
HDX-589MDPL 89' crank-up w/motor drive .....	T 7699.99
HDX-689MDPL 89' HD crank-up w/motor .....	T 14999.99
HDX-5106MDPL 106' HD crank-up w/motor .....	T 15999.99

### COMPACT TMM (Top mt rotor for full retraction)

TMM-433SS 33' crank-up tower .....	T 1139.99
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## AES Price

## US Tower - continued

TMM-433HD 33' HD crank-up tower .....	T 1379.99
TMM-511SS 41' crank-up tower .....	T 1499.99

### ACCESSORIES FOR CRANK-UP TOWERS

CX-2 Coax arms (2) for 2-section tower .....	\$ 59.99
CX-3 Coax arms (3) for 3-section tower .....	77.99
CX-4 Coax arms (4) for 4-section tower .....	109.99
CX-5 Coax arms (5) for 5-section tower .....	149.99
CX-6 Coax arms (6) for 6-section tower .....	190.99
HDP Service platform .....	T 813.99
STS-4 Rotor accessory for TX/TMM towers ..	T 211.99
IV-16 Inverted vee arm for MA's .....	41.99
M-5 2" OD 5' mast extension for MA's .....	40.99
M-10 2" OD 10' mast .....	T 77.99
M-15 2" OD 15' mast .....	T 109.99
M-20 2" OD 20' mast .....	T 136.99
M-15R 2" OD 15' reinforced mast .....	T 156.99
M-20R 2" OD 20' reinforced mast .....	T 207.99
CM-20 2" OD 20' cromoly mast .....	T 449.99
MD-75 Heavy duty 1 HP motor drive .....	T 997.99
MDP-750* Pull-down drive; TX-472/HDX-555 T ..	1549.99
MDPL-1000* Pull-down drive; HDX-572 .....	T 2106.99

\*Requires MCL-100 or RMC-1000. MDP-750 and MDPL-1000 not sold separately

MRF Mast raising fixture .....	268.99
MCL-100 Limit switch package .....	465.99
RMC-1000 Remote control w/limit switch .....	997.99
RP-3 Rotor plate for 10" section .....	39.99
RP-4 Rotor plate for 12 1/2" section .....	47.99
RP-5 Rotor plate for 15" section .....	52.99
TRX-80 Raising fixture; TX-438/455; HDX-538/555 T ..	434.99
TRX-80HD Raising fixture; TX-472/489; HDX-572/589 T ..	569.99
TRX-100HD Raising fixture; HDX-689/5106 T ..	799.99
TB-2US Thrust bearing; 2" mast w/2 flange holes ..	104.99

### MA-SERIES TUBULAR TOWERS

MA-40 40' crank-up mast .....	T \$849.99
MA-550 55' crank-up mast .....	T 1399.99
MA-550MDP 55' crank-up mast w/motor .....	T 2729.99
MA-770* 70' crank-up mast .....	T 2359.99
MA-770MDP* 70' crank-up mast w/motor .....	T 3729.99
MA-850* 85' crank-up mast .....	T 3649.99
MA-850MDP* 85' crank-up mast w/motor .....	T 5029.99

\*Requires MAB or MARB-series base

### MA-SERIES ACCESSORIES

CX-2M Coax arms (2) for MA-40 .....	\$ 59.99
CX-3M Coax arms (3) for MA-550 .....	88.99
CX-4M Coax arms (4) for MA-770 .....	133.99
CX-5M Coax arms (5) for MA-850 .....	159.99
MAB-40 Hinged base for MA-40 .....	T 359.99
MAB-550 Hinged base for MA-550 .....	T 429.99
MAB-770 Hinged base for MA-770 .....	T 522.99
MAB-850 Hinged base for MA-850 .....	T 633.99
MAF-40 Raising fixture for MA-40 .....	219.99
MAF-550 Raising fixture for MA-550 .....	T 299.99
MAF-770 Raising fixture for MA-770 .....	T 311.99
MAF-850 Raising fixture for MA-850 .....	T 412.99
MARB-40 Rotor base accessory for MA-40 .....	T 549.99
MARB-550 Rotor base accessory for MA-550 T ..	649.99
MARB-770 Rotor base accessory for MA-770 T ..	774.99
MARB-850 Rotor base accessory for MA-850 T ..	916.99

All US TOWER products are drop-shipped (shipped direct to you from the US TOWER factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Visalia, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so

## US Tower - continued

## AES Price

please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

## UNADILLA (See W2AU)

## UNIDEN (UNI)

PC-68LW AM Mobile CB w/WX alert .....	\$ 99.99
PC-68XL AM Mobile CB .....	79.99
PC-78LW AM Mobile CB w/WX alert .....	119.99
PC-78XL AM Mobile CB .....	99.99
PRO-510XL AM Mobile CB .....	39.99
PRO-520XL AM Mobile CB .....	54.99
PRO-538W AM Mobile CB w/WX .....	59.99

### UNIDEN BEARCAT

BC-244CLT 30 ch scanner w/instant WX .....	\$ 99.99
BC-248CLT 50 ch scanner w/WX alert .....	109.99
BC-278CLT 100 ch scanner/SAME WX alert ..	169.99
BC-350A 50 ch prog/service search w/AC ps ..	109.99
BC-785D 1000 ch scanner/trunk/SAME WX ..	369.99
BCI-25D Digital board for BC-785D .....	299.99
BC-780XLT 500 ch scanner/trunk/SAME WX ..	299.99
BC-895XLT 300 ch prog scanner/trunking ..	199.99
BCT-7 Pre-prog warning scan/air/800/AC ps ..	169.99

BC-003 Switch box for BC-002 .....	4.99
BC-60XLT-1 30ch prog pocket; use AA batts ..	89.99
BC-80XLT 50 ch prog pocket scanner/800 .....	119.99
UA-502 Cig power cord .....	11.99
AD-100 AC adapter/batt cgr; earlier scanners ..	9.99
AD-140 Extra charger; BC-100XLT/200XLT ..	13.99
BP-200 Extra battery; BC-200XLT .....	26.99
BP-205 Extra battery; BC-100XLT .....	26.99

SC-180B 100 ch sport pocket/800 MHz .....	169.99
SC-200 200 ch sport pocket/800 MHz .....	199.99
AD-70 Extra charger .....	10.99
BP-120 Extra battery .....	18.99
LC-120 Carrying case; BC120XLT/230XLT ..	19.99
(KOS) QZ/99 Noise reduction headphones ..	59.99
UA-502 Cig power cord .....	11.99

BC-245XLT 300 ch pocket/trunk/smart scan ..	219.99
AD-70 Extra charger .....	10.99
BP-180 Extra battery .....	16.99
CRX-120 Desk charger; BC-245XLT .....	24.99
LC-120 Carrying case .....	19.99
UA-502 Cig power cord .....	11.99
BC-250D 1000 ch pocket/trunk/SAME WX .....	369.99
BCI-25D Digital board for BC-250D .....	299.99
BP-250 Extra battery .....	14.99

WX-500 SAME weather/hazard alert/ps .....	D 39.99
BP-2500 Extra batt; BC2500/3000 .....	63.99
LC-150B Carrying case; SC-150B .....	2.99
RFD-001 IN/IL/KY/OH/MI/WI freq book .....	4.99
Atlantis 5w VHF marine handheld .....	D 99.99
HH-940P 1w submersible VHF marine HH .....	D 99.99
Voyager 5w VHF marine handheld/lith ion batt ..	159.99
Polaris 25w VHF marine Xcvr w/hailer .....	179.99
Solaris 25w 90 ch VHF marine Xcvr .....	99.99
Oceanus 25w 90 ch VHF marine Xcvr .....	D 129.99

## Unified Microsystems (UNM)

VK-64 CW/voice keyer .....	\$229.99
KC-4 CW cable for VK-64 to transceiver .....	9.99
VKC-8 8-pin audio cable for VK-64 to Xcvr ..	24.99
XT-4 Small size CW memory keyer .....	69.99
KC-4 CW cable for XT-4 to transceiver .....	9.99
W9XT Contest card for IBM PC & compatible ..	139.99
CCC-8 8pin mic contest card cable semi-kit ..	44.99

## UNI-SOLAR (UNS)

USF-5/FLX-5 5w flexible solar cell .....	\$ 89.99
USF-32/FLX-32 32w flexible solar cell .....	269.99



# Universal Towers (UNT)

4-30	4 sq ft wind load 30' alum tower	.....T	\$325.99
9-30	9 sq ft wind load 30' alum tower	.....T	438.99
12-30	12 sq ft wind load 30' alum tower	.....T	576.99
21-30	21 sq ft wind load 30' alum tower	.....T	679.99
23-30	23 sq ft wind load 30' alum tower	.....T	899.99
35-30	35 sq ft wind load 30' alum tower	.....T	1019.99
4-40	4 sq ft wind load 40' alum tower	.....T	539.99
7-40	7 sq ft wind load 40' alum tower	.....T	679.99
9-40	9 sq ft wind load 40' alum tower	.....T	759.99
12-40	12 sq ft wind load 40' alum tower	.....T	899.99
15-40	15 sq ft wind load 40' alum tower	.....T	1013.99
21-40	21 sq ft wind load 40' alum tower	.....T	1119.99
23-40	23 sq ft wind load 40' alum tower	.....T	1339.99
4-50	4 sq ft wind load 50' alum tower	.....T	769.99
5-50	5 sq ft wind load 50' alum tower	.....T	869.99
7-50	7 sq ft wind load 50' alum tower	.....T	979.99
9-50	9 sq ft wind load 50' alum tower	.....T	1089.99
15-50	15 sq ft wind load 50' alum tower	.....T	1449.99
16-50	16 sq ft wind load 50' alum tower	.....T	1569.99
4-60	4 sq ft wind load 60' alum tower	.....T	1089.99
6-60	6 sq ft wind load 60' alum tower	.....T	1339.99
7-60	7 sq ft wind load 60' alum tower	.....T	1429.99
9-60	9 sq ft wind load 60' alum tower	.....T	1529.99
3-70	3 sq ft wind load 70' alum tower	.....T	1379.99
4-70	4 sq ft wind load 70' alum tower	.....T	1749.99
6-70	6 sq ft wind load 70' alum tower	.....T	1779.99
7-70	7 sq ft wind load 70' alum tower	.....T	1869.99
3-80	3 sq ft wind load 80' alum tower	.....T	1919.99
4-80	4 sq ft wind load 80' alum tower	.....T	2229.99
2-90	2 sq ft wind load 90' alum tower	.....T	2299.99
B-14	Base for tower	.....	65.99
B-18	Base for tower	.....	65.99
B-22	Base for tower	.....	103.99
B-26	Base for tower	.....	132.99
Extra 14"	stubs (between base & tower)	.....set	14.99
Extra 18"	stubs (between base & tower)	.....set	26.99
Extra 22"	stubs (between base & tower)	.....set	42.99
Extra 26"	stubs (between base & tower)	.....set	42.99
Extra 30"	stubs (between base & tower)	.....set	63.99
RFM-11	Flat roof mt for guyed tower	.....	46.99
RFM-14	Flat roof mt for guyed tower	.....	46.99
RFM-18	Flat roof mt for guyed tower	.....	69.99
RFM-22	Flat roof mt for guyed tower	.....	97.99
RFM-26	Flat roof mt for guyed tower	.....	129.99
R-11	Rotor mount	.....	31.99
R-14	Rotor mount	.....	46.99
R-18	Rotor mount	.....	62.99

## SEE LITERATURE FOR TOWER CONFIGURATIONS

11 Top 11"	top tower section	.....T	110.99
14 Top 14"	top tower section	.....T	138.99
18 Top 18"	top tower section	.....T	252.99
14 Taper 14"	taper tower section	.....T	122.99
18 Taper 18"	taper tower section	.....T	219.99
22 Taper 22"	taper tower section	.....T	327.99
26 Taper 26"	taper tower section	.....T	440.99
11 Straight 11"	straight tower section	.....T	108.99
14 Straight 14"	straight tower section	.....T	122.99
18 Straight 18"	straight tower section	.....T	219.99
22 Straight 22"	straight tower section	.....T	327.99
26 Straight 26"	straight tower section	.....T	440.99
HD35-40	35 sq ft wind load 40' alum tower	T	1569.99
HD21-50	21 sq ft wind load 50' alum tower	T	1669.99
HD9-60	9 sq ft wind load 60' alum tower	T	1759.99
HD16-60	16 sq ft wind load 60' alum tower	T	2119.99
HD21-60	21 sq ft wind load 60' alum tower	T	2229.99
HD8-70	8 sq ft wind load 70' alum tower	T	1979.99

HD12-70	12 sq ft wind load 70' alum tower	T	2449.99
HD17-70	17 sq ft wind load 70' alum tower	T	2669.99
HD21-70	21 sq ft wind load 70' alum tower	T	2779.99
HD8-80	8 sq ft wind load 80' alum tower	T	2529.99
HD9-80	9 sq ft wind load 80' alum tower	T	2639.99
HD11-80	11 sq ft wind load 80' alum tower	T	2999.99
HD12-80	12 sq ft wind load 80' alum tower	T	2999.99
HD16-80	16 sq ft wind load 80' alum tower	T	3219.99
HD4-90	4 sq ft wind load 90' alum tower	T	2629.99
HD8-90	8 sq ft wind load 90' alum tower	T	3109.99
HD11-90	11 sq ft wind load 90' alum tower	T	3549.99
HD4-100	4 sq ft wind load 100' alum tower	T	3529.99
HD8-100	8 sq ft wind load 100' alum tower	T	3779.99
B-30	Base for HD tower	.....	207.99
RFM-30	Flat roof mt for guyed tower	.....	180.99
1-5/8SC	Flange bearing	.....	98.99
2-3/16SC	Flange bearing	.....	109.99
Top Plate	Flange plate welded to top section	.....	23.99

**SEE LITERATURE FOR TOWER CONFIGURATIONS**

30 Taper 30"	taper tower section	.....T	554.99
30 Straight 30"	straight tower section	.....T	554.99
1-1/4" OD x 5 ft	aluminum mast	.....T	23.99
1-1/4" OD x 10 ft	aluminum mast	.....T	33.99
1-1/2" OD x 10 ft	aluminum mast	.....T	41.99
2" OD x 8 ft	aluminum mast	.....T	49.99
2" OD x 16 ft	aluminum mast	.....T	95.99

All UNIVERSAL TOWERS products are drop-shipped (shipped direct to you from the UNIVERSAL TOWERS factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mt. Clemens, Michigan via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

**VALOR (See PRO AM)**

**VANCO (VCO)**

370052	3 1/2 digit multimeter	.....	\$ 19.99
HF-24RS	Scanner headphones w/dual volume	.....	19.99
SWR-1	SWR/field strength meter	.....	19.99
SWR-3	Mini SWR meter	.....	14.99

**VAN GORDEN (VAN)**

Hi-Q 1:1	balun	.....	\$ 14.99
Hi-Q 4:1	balun	.....	14.99
Antenna center	insulator	.....	6.99
Antenna end	insulator	.....pair	4.99
Dog bone	type antenna insulator	.....each	99
NR-100	Nylon antenna guy rope	.....100 ft.	4.99
NR-1000	Nylon ant guy rope	.....1000 ft.	44.99
D-80	80m 130' wire dipole antenna	.....	32.99
SD-80	Short 90' 80m dipole	.....	36.99
D-40	40m 66' wire dipole antenna	.....	29.99
SD-40	Short 45' 40m dipole	.....	34.99
D-20	20m 33' wire dipole antenna	.....	28.99
D-15	15m 22' wire dipole antenna	.....	27.99
D-10	10m 16' wire dipole antenna	.....	26.99
All Bander	Dipole 160-10m (use tuner) 135' ant	.....	29.99
Shorty All Bander	160-10m (use tuner) 70' ant	.....	44.99
G5RV	Flat-top 3.5-30 102' ant/xmfr/100' cable	.....	50.99
G5RV-E	Flat-top 3.5-30 102' ant/31' twinlead	.....	28.99
G5RV-JR	Flat-top 7-30 52' ant/17' twinlead	.....	24.99
G5RV-M	Flat-top 1.8-30 204' ant/65' twinlead	.....	50.99
N connector	Type N connector for 9913/8214	.....	4.99
#14	Stranded hard drawn ant wire	.....100 ft.	11.99

#14	Stranded hard drawn ant wire	.....150 ft.	16.99
300 ohm	1kw transmitting twinlead	.....100 ft.	19.99
450 ohm	18ga solid ladderline	.....100 ft.	14.99
450 ohm	18ga solid ladderline	.....1000 ft.	109.99
450 ohm	14ga stranded ladderline	.....100 ft.	29.99
450 ohm	14ga stranded ladderline	.....1000 ft.	229.99
(WA1)	WA1FFL Ladder-Loc	450 ohm ctr ins	12.99
RG-213	Non-contaminating	.....per ft.	.49
RG-213/500	Non-contaminating	.500 ft. Roll	179.99
8X-1-55T	1.5' RG-8X coax/silver teflon PL259s	.....	7.99
8X-3ST	3' RG-8X coax/silver teflon PL259s	.....	8.99
8X-6ST	6' RG-8X coax/silver teflon PL259s	.....	10.99
8X-12ST	12' RG-8X coax/silver teflon PL259s	.....	11.99
8X-25ST	25' RG-8X coax/silver teflon PL259s	.....	15.99
8X-50ST	50' RG-8X coax/silver teflon PL259s	.....	24.99
8X-75ST	75' RG-8X coax/silver teflon PL259s	.....	31.99
8X-100ST	100' RG-8X coax/silver teflon PL259s	.....	37.99
213-25ST	25' RG-213 coax/silver teflon PL259s	.....	25.99
213-50ST	50' RG-213 coax/silver teflon PL259s	.....	38.99
213-75ST	75' RG-213 coax/silver teflon PL259s	.....	54.99
213-100ST	100' RG-213 coax/silver teflon PL259s	.....	72.99

**VECTRONICS (VEC)**

VC-300M	300w mobile antenna tuner	.....	\$ 99.99
VC-300DL	300w antenna tuner	.....	149.99
VC-300D	300w digital antenna tuner	.....	179.99
HFT-1500	1.5kw antenna tuner	.....	399.99
AT-100	3-30 MHz active antenna/tuner	.....	79.99
HPF-1	High pass filter, 75 or 300 ohms	.....	24.99
HPF-2	Deluxe high pass filter, 75 or 300 ohms	.....	29.99
LP-30	1.5kw low pass filter	.....	69.99
LP-2500	2.5kw low pass filter	.....	129.99
CK-200	Deluxe keyer	.....Δ	59.99
DL-300M	300w 150MHz dummy load	.....	44.99
DL-650M	1.5kw 650MHz dummy load	.....	74.99
DL-2500	2.5kw 150MHz dummy load	.....	179.99
PM-30HF	300/3kw HF wattmeter	.....	79.99
PM-30VU	30/300w VHF/UHF wattmeter	.....	89.99
121K	Crystal radio set kit	.....	19.99
131K	Aircraft receiver kit	.....	29.99
201K	CW keyer kit	.....	24.99
412K	Nicad/NiMH battery conditioner kit	.....Δ	34.99
422K	FM broadcast SCA decoder kit	.....	27.99
830K	Super SSB audio filter kit	.....	19.99
841K	Tunable SSB/CW audio filter kit	.....	34.99
1140K	40m receiver kit	.....	29.99
1240K	40m QRP CW transmitter kit	.....	29.99
1290K	AM radio transmitter kit	.....	29.99
1294K	TV transmitter kit	.....	27.99
1402K	2m preamp kit	.....Δ	14.99

**VELLEMAN (VEL)**

DVM-810	3 1/2 digit digital multimeter	.....	\$ 9.99
DVM-850BL	Deluxe 3 1/2 digit DMM w/holder	.....	19.99
VT-COAX	Coax stripper; RG-58/59/62/6	.....	14.99
VT-TS	25-piece hobbyist tool set	.....	9.99

**VIBROPLEX (VIB)**

090	Original Gold Bug	.....	\$309.99
100	Original Presentation Super deluxe bug	.....	269.99
105	Original Deluxe Bug	.....	199.99
110	Original Standard Bug	.....	169.99
113	VibroKeyer Gold Paddle	.....	279.99
115	VibroKeyer Deluxe Paddle	.....	184.99
120	VibroKeyer Standard Paddle	.....	149.99
123	Iambic Gold Paddle	.....	279.99
125	Iambic Presentation Paddle	.....	249.99
130	Iambic Deluxe Paddle	.....	189.99
135	Iambic Standard Paddle	.....	149.99
145	Triangular Brass Racer Iambic paddle	.....	129.99
150	Square Brass Racer Iambic paddle	.....	139.99



## Vibroplex - continued AES Price

153 Gold straight key .....	279.99
155 Standard straight key .....	149.99
160 Deluxe straight key .....	189.99
162 Gold Hand key/lambic Paddle double .....	369.99
163 Gold Hand key/VibroKeyer Paddle double .....	369.99
165 Deluxe Hand key/lambic Paddle double .....	329.99
170 Dlx Hand key/VibroKeyer Paddle double .....	329.99
175 Standard Hand key/lambic Paddle double .....	279.99
180 Std Hand key/VibroKeyer Paddle double .....	279.99
185 Square Racer Deluxe lambic paddle .....	129.99
190 Square Racer Standard lambic paddle .....	109.99
195 Blue Racer 2000 Dlx Millennium Bug .....	189.99
198 Blue Racer 2000 Dlx Millennium Bug .....	209.99
200 Code Warrior Junior Paddle .....	99.99

## WA1FFL (WA1)

Ladder-Loc 450 ohm ladderline center attach .....	\$ 12.99
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## W2AU (Unadilla) (W2A)

W2AU 1:1 160-10m balun, lightning arrestor .....	\$ 24.99
W2AU 4:1 160-10m balun, lightning arrestor .....	24.99
W2AU Beam Balun, 1:1 .....	24.99
W2DU-HF 1:1 1.8-30 MHz choke balun .....	26.99
W2DU-VHF 1:1 30-250 MHz choke balun .....	26.99
W2DU Beam Balun 40-10m 1:1 choke balun .....	26.99
HA AN-sulator center insulator .....	9.99
HE END-sulator end insulators .....	pair 6.99
KW-80CW Reyco 80m CW ant traps .....	pair 48.99
KW-80F Reyco 75m phone ant traps .....	pair 48.99
KW-40 Reyco 40m antenna traps .....	pair 42.99
KW-30 Reyco 30m antenna traps .....	pair 42.99
KW-20 Reyco 20m antenna traps .....	pair 41.99
KW-17 Reyco 17m antenna traps .....	pair 41.99
KW-15 Reyco 15m antenna traps .....	pair 41.99
KW-12 Reyco 12m antenna traps .....	pair 41.99
KW-10 Reyco 10m antenna traps .....	pair 41.99
W2AU/W2VS 5-band ant kit (use tuner) .....	85.99

## W5YI (W5Y)

BCOM Basic Communications Electronics book .....	\$ 17.99
BDIG Basic Digital Electronics book .....	17.99
BELC Basic Electronics book .....	17.99
ECS-02 Extra upgrade software/manual/code .....	39.99
GROL Commercial license elements 1/3/8 manual .....	39.99
GRSP Commercial study software w/GROL book .....	69.99
GSTD Getting Started in Electronics book .....	17.99
GUS General upgrade software/manual/code .....	34.99
GW05 Gordon West 6 ea 0-5 wpm code tapes .....	29.99
GW13 Gordon West 6 ea 5-16 wpm code tapes .....	29.99
GW20 Gordon West 6 ea 10-28 wpm code tapes .....	29.99
GWEM-02 Gordon West Extra study manual .....	19.99
GWEM-02 Gordon West 6 ea Extra theory tapes .....	29.99
GWGM Gordon West General study manual .....	12.99
GWGW Gordon West 4 ea General theory tapes .....	19.99
GWTM-03 Gordon West Tech study manual .....	15.99
GWTW-03 Gordon West 6 ea Tech theory tapes .....	29.99
HOS-03 Ham operator software/code (all classes) .....	39.99
HOSB-03 Ham op software/code/3 books (all classes) .....	69.99
NCS-03 Technician software w/manual .....	39.99
TPG-03 Tech/General software/manuals/code .....	54.99
WMC 0-48 wpm code software .....	14.99

## WAHL (WAH)

7740 Quick charge cordless soldering iron kit .....	\$ 47.99
7971 30 minute butane soldering iron .....	19.99
7974 120 minute butane soldering iron .....	27.99

## Watson Guptill (WAT)

059677 2003 World Radio TV Handbook .....	D \$ 24.95
059685 2004 World Radio TV Handbook .....	29.95

## WELLER (WEL)

7200PK 75w soldering gun kit .....	\$ 28.99
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## Weller - continued AES Price

7235 Extra standard tips (2) for 7200PK .....	3.99
SP-23LK 25w soldering iron kit .....	17.99
WP-25 25w professional soldering iron .....	34.99
ST-4 3/8" screwdriver tip for WP-25 .....	4.99
ST-5 1/2" single flat tip for WP-25 .....	4.99
W-60P 60w temp controlled soldering iron .....	64.99
CT-5E7 3/8" screwdriver tip for W-60P .....	6.99
WESD51 50w adjustable soldering station .....	149.99
WSTA3 Pyrophen portable LP soldering iron .....	99.99
WST2 Pyrophen Jr. portable butane iron .....	89.99
WTCPT 60w temp controlled soldering stn .....	119.99

## West Mtn Radio (WES)

RB/PR/C Rigblaster Pro; 8-pin/RJ-45 .....	\$249.99
RB/PL/C Rigblaster Plus; 8-pin/RJ-45 .....	139.99
RB/M8/C Rigblaster; 8-pin/RJ-45 .....	109.99
RB/NO/8C Rigblaster nomic for 8-pin radios .....	59.99
RB/NO/RJC Rigblaster nomic for RJ-45 radios .....	59.99
RB/NO/FT100 Rigblaster nomic; Yae modular 6 .....	59.99
RR/4010S/C Rigrunner FET 9outlet/cbl/connectors .....	119.99
RR/4012/C Rigrunner 40A 12outlet/cbl/connectors .....	112.99
RR/4008/C Rigrunner 40A 8outlet/cbl/connectors .....	92.99
RR/4005/C Rigrunner 40A 5outlet/cbl/connectors .....	59.99
C3D/PK12 12pr PowerPole 30A connectors .....	10.99
CR/Tool Gardner Bender forged crimp tool .....	9.99

## WILSON (WIL)

FGT-4/BLK 4' black fiberglass CB whip .....	\$ 27.99
FGT-4/WHIT 4' white fiberglass CB whip .....	27.99
Little Wil Magnetic mt CB antenna .....	31.99
Trucker 2000 Black mobile 1/2-24 CB whip .....	54.99
W-1000 Magnetic Black mobile CB antenna .....	76.99
W-1000 Roof Top Black mobile CB antenna .....	57.99
W-1000 Trunk Lip Black mobile CB antenna .....	65.99

## WINEGARD (WIN)

CX-0625 25' RG-6 TV coax w/F connectors .....	\$ 10.99
CX-0650 50' RG-6 TV coax w/F connectors .....	15.99
CX-0675 75' RG-6 TV coax w/F connectors .....	19.99
CX-6100 100' RG-6 TV coax w/F connectors .....	24.99
PR-7010 22 el 66.5" boom Prostar TV ant .....	39.99
PR-7032 33 el 103.25" boom Prostar TV ant .....	64.99
PR-7042 43 el 149.75" boom Prostar TV ant .....	99.99
TV-2900 Outdoor TV matching transformer .....	2.99

## YAESU (YAE)

FT-1000MP Mk V 200w HF Xcvr/EDSP/tuner/ps .....	2699.99
Mk V Field 100w HF Xcvr/EDSP/tuner/ps .....	2179.99
DVS-2 Digital voice recording module .....	219.99
FH-1 Remote control keypad .....	88.99
FTV-1000 200w 6m transverter; Mk V .....	899.99
FP-29 30vdc ps; FTV-1000 w/orig MP/Field .....	499.99
FRB-5 Relay board; FTV-1000 w/orig MP .....	50.99
MD-100A8X Desk mic w/tone control .....	129.99
MD-200A8X Deluxe high fidelity desk mic .....	379.99
MH-318B Extra hand microphone .....	39.99
SP-8 External speaker w/filters .....	159.99
LL-7 Phone patch unit for SP-8 .....	139.99
TCX0-6 Deluxe TCXO unit, 0.5 ppm .....	174.99
YF-110CN 250 Hz 3rd IF main Rcvr CW filt .....	144.99
YF-110SN 2 KHz 3rd IF main Rcvr SSB filt .....	144.99
YF-114CN 250 Hz 2nd IF main Rcvr CW filt .....	144.99
YF-114SN 2 KHz 2nd IF main Rcvr SSB filt .....	144.99
YF-115C 500 Hz CW Collins mesh filter .....	159.99
YH-77STA Open-air type stereo headphones .....	51.99
FT-1000D Deluxe HF Xcvr/ps .....	D 3999.99
DVS-2 Digital voice recording module .....	219.99
FIF-232C Interface for RS-232 .....	95.99
MD-100A8X* Desk mic w/tone control .....	129.99
*Cable needed for FT-1000D; contact service for info	
MD-200A8X Deluxe high fidelity desk mic .....	379.99
SP-5 External spkr w/audio filter .....	144.99
LL-5 Phone patch unit for SP-5 .....	129.99

## Yaesu - continued AES Price

YF-110CN/XF-F 250 Hz CW xtal filter (455 KHz) .....	144.99
YH-77STA Open-air type stereo headphones .....	51.99
FT-920 9-band Xcvr/AF-DSP/tuner/6m/kyr .....	1199.99
<b>FM-1 FM unit FREE with FT-920! Limited Time!</b>	
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
FM-1 FM unit .....	62.99
MD-100A8X Desk mic w/tone control .....	129.99
MD-200A8X Deluxe high fidelity desk mic .....	379.99
SP-8 External speaker w/filters .....	159.99
LL-7 Phone patch unit for SP-8 .....	139.99
T-9018320 Extra DC cable .....	26.99
TCX0-7 TCXO unit .....	99.99
YF-116A 6 KHz AM filter .....	119.99
YF-116C 500 Hz CW filter .....	119.99
YH-77STA Open-air type stereo headphones .....	51.99
FT-847 HF/6m/2m/430 Earth Station Xcvr/mic .....	1579.99
<b>*\$300 rebate from Yaesu thru 12/31/03!</b>	
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
ATAS-100 HF/6/2/430 motorized mob ant D .....	269.99
ATAS-120 HF/6/2/430 motorized mob ant .....	299.99
ATBK-100 Antenna base kit; use w/base mt .....	89.99
CT-39A Packet cable .....	9.99
CT-61 Interface cable; FT-847 to amp .....	15.99
FC-20 Automatic antenna tuner .....	269.99
FVS-1A Voice synthesizer .....	43.99
MD-100A8X Desk mic w/tone control .....	129.99
MD-200A8X Deluxe high fidelity desk mic .....	379.99
MH-3608 TTP mobile microphone .....	60.99
MMB-66 Quick release mobile mtg bkt .....	39.99
SP-8 External speaker w/filters .....	159.99
T-9018320 Extra DC cable .....	26.99
YF-115C 500 Hz CW Collins mesh filter .....	159.99
YF-115S-02 2.5 KHz SSB Collins mesh filt .....	159.99
YH-77STA Open-air type stereo headphones .....	51.99
FT-840 HF Xcvr/SP SW Rcvr/mic .....	699.99
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
FC-10 External coax fed auto tuner .....	379.99
FC-800 External long wire auto tuner .....	439.99
FIF-232C Interface for RS-232 .....	95.99
FM-747 FM unit .....	62.99
MD-100A8X* Desk mic w/tone control .....	129.99
*Cable needed for FT-840; contact service for info	
MD-200A8X Deluxe high fidelity desk mic .....	379.99
MLS-100 Mobile speaker .....	45.99
MMB-20 Mobile mount .....	34.99
SP-8 External speaker w/filter .....	144.99
T-9018320 Extra DC cable .....	26.99
TCX0-4 TCXO unit .....	99.99
YF-112A 6 KHz AM filter .....	119.99
YF-112C 500 Hz CW filter .....	119.99
YH-77STA Open-air type stereo headphones .....	51.99
FT-897 HF/6m/2m/430 portable/base Xcvr .....	989.99
FP-30 Internal power supply .....	209.99
ATAS-100 HF/6/2/430 motorized mob ant D .....	269.99
ATAS-120 HF/6/2/430 motorized mob ant .....	299.99
ATBK-100 Antenna base kit; use w/base mt .....	89.99
CT-39A Packet cable .....	9.99
CT-62 CAT interface cable .....	29.99
FC-30 Antenna tuner; bolts to FT-897 .....	239.99
FNB-78 4.5ah NiMH batt (will accept 2) .....	99.99
CD-24 4-hr charge adapter for FNB-78 .....	119.99
PA-26B 110vac charger for CD-24 .....	85.99
MD-100A8X Desk mic w/tone control .....	129.99
MD-200A8X Deluxe high fidelity desk mic .....	379.99
MH-36E8J TTP mic .....	60.99
MLS-100 Mobile speaker .....	45.99
MMB-80 Mobile mounting bracket .....	35.99
SP-6 External speaker w/filter .....	144.99



## Yaesu - continued

## AES Price

Y-9018320 Extra DC cable .....	26.99
TCXO-9 TCXO unit, 0.5 ppm .....	99.99
YF-122C 500 Hz Collins CW filter .....	159.99
YF-122CN 300 Hz Collins CW filter .....	159.99
YF-122S 2.3 KHz Collins SSB filter .....	159.99
YH-77STA Open-air type stereo headphones .....	51.99
<b>FT-857</b> Mini HF/6m/2m/430 Xcvr .....	799.99
<b>DSP-2 DSP unit FREE with FT-857! thru 12/31/03</b>	
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
ATAS-100 HF/6/2/430 motorized mob ant D .....	269.99
ATAS-120 HF/6/2/430 motorized mob ant .....	299.99
ATBK-100 Antenna base kit; use w/base mt .....	89.99
CT-39A Packet cable .....	9.99
CT-58 Band data cable; Yaesu amplifier .....	29.99
CT-62 CAT interface cable .....	29.99
DSP-2 DSP unit .....	66.99
FC-30 Antenna tuner; bolts to FT-897 .....	239.99
MD-100A8X Desk mic w/tone control .....	129.99
MD-200A8X Deluxe high fidelity desk mic .....	379.99
MH-36E8J TTP mic .....	60.99
MH-59A8J Remote control TTP mic .....	64.99
MLS-100 Mobile speaker .....	45.99
SP-6 External speaker w/filter .....	144.99
TCXO-9 TCXO unit, 0.5 ppm .....	99.99
YF-122C 500 Hz Collins CW filter .....	159.99
YF-122CN 300 Hz Collins CW filter .....	159.99
YF-122S 2.3 KHz Collins SSB filter .....	159.99
YH-77STA Open-air type stereo headphones .....	51.99
YSK-857 Separation kit .....	54.99
<b>FT-817</b> 5w HF/6m/2m/430 SSB/AM/FM Xcvr .....	729.99
<b>FNB-72 &amp; NC-72 FREE with FT-817! thru 12/31/03</b>	
(W4R) OTT-1 One-touch tune for FT-817 .....	59.99
CSC-83 Soft case w/side pocket for FT-817 .....	25.99
CT-39A Packet cable .....	9.99
CT-62 CAT interface cable .....	29.99
EDC-6 Extra DC cord; plug & wire only .....	7.99
FNB-72 1000mah 9.6v nicad battery .....	60.99
MH-36E8J TTP mic .....	60.99
MLS-100 Mobile speaker .....	45.99
NC-72B Nicad wall charger .....	18.99
TCXO-9 TCXO unit, 0.5 ppm .....	99.99
YF-122C 500 Hz Collins CW filter .....	159.99
YF-122CN 300 Hz Collins CW filter .....	159.99
YF-122S 2.3 KHz Collins SSB filter .....	159.99
<b>FT-100D</b> Mini HF/6m/2m/440 Xcvr .....	949.99
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
ATAS-100 HF/6/2/430 motorized mob ant D .....	269.99
ATAS-120 HF/6/2/430 motorized mob ant .....	299.99
ATBK-100 Antenna base kit; use w/base mt .....	89.99
CT-39A Packet cable .....	9.99
CT-58 Band data cable; Yaesu amplifier .....	29.99
CT-62 CAT interface cable .....	29.99
CT-69 6-pin modular - 8-pin mic jack adapt D .....	29.99
FC-20 Automatic antenna tuner .....	269.99
MLS-100 Mobile speaker .....	45.99
MMB-62 Remote front panel mounting bkt .....	39.99
MMB-67 Quick release bracket .....	29.99
SP-6 External speaker w/filter .....	144.99
LL-5 Phone patch unit for SP-6 .....	129.99
T-9021925 Extra DC cord .....	42.99
XF-117A 6 KHz AM filter .....	119.99
XF-117CN 300 Hz CW filter .....	99.99
Suggest dealer installation of filter in FT-100D	
Only one optional filter may be installed	
YH-77STA Open-air type stereo headphones .....	51.99
YSK-100 Separation kit .....	79.99
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
YA-30 1.8-30 MHz broadband dipole ant .....	229.99
YH-77STA Open-air type stereo headphones .....	51.99

## Yaesu - continued

## AES Price

YS-60 1.8-60 MHz 2kw PEP wattmeter .....	129.99
YS-500 140-520 MHz 200w PEP wattmeter .....	109.99
<b>Quadra System</b> VAMP1000HF+6m amp/ps/tuner .....	4499.99
<b>FRG-100B</b> 1-30 MHz shortwave receiver .....	549.99
FIF-232C Interface for RS-232 .....	95.99
FM Unit-100 FM unit .....	47.99
TCXO-4 TCXO unit .....	99.99
YF-110CN/XF-F 250 Hz CW xtal filter .....	144.99
YF-115C 500 Hz CW Collins mech filter .....	159.99
<b>VR-120D</b> 1MHz 1.2995GHz AM/FM hand/cell bld .....	189.99
CT-35 Clone cable; VR-120/D .....	9.99
CA-34 Charger sleeve; NC-82/VR-120D .....	4.99
CSC-76 Soft case for VR-120/D .....	19.99
EDC-15 DC adapter .....	38.99
FNB-79 Nicad battery for VR-120D .....	8.99
NC-82 Charger stand .....	8.99
PA-308 AC adapter .....	7.99
<b>VR-500</b> 1M-1.3G AM/FM/SSB hand/cell bld .....	299.99
CT-35 Clone cable; VR-500 .....	9.99
ADMS-3 Windows programming software .....	38.99
CSC-72 Soft case for VR-500 .....	19.99
EDC-58 DC adapter w/noise filter .....	26.99
EDC-6 DC adapter; plug & wire only .....	7.99
FNB-59 Nicad battery for VR-500 .....	29.99
NC-60B Wall charger .....	14.99
<b>VR-500D</b> 1M-2.6G base rcvr AM/FM/SSB/cell bld .....	619.99
DSP-1 DSP unit .....	119.99
DVS-4 Digital voice recorder .....	47.99
FVS-1A Voice synthesizer .....	43.99
E-736 DC cable for FT-736R .....	16.99
FEF-736-220 220 MHz module; FT-736R .....	309.99
AD-3 100w 2m/440 duplexer .....	52.99
FRG-4 DTMF pager unit; FT-5200/6200 .....	9.99
<b>FT-8800R</b> 50w 2m/35w 440 FM Xcvr .....	399.99
<b>*\$25 rebate from Yaesu thru 12/31/03!</b>	
CT-39A Packet cable .....	9.99
MLS-100 Mobile speaker .....	45.99
MMB-60 Quick release mobile mount .....	29.99
SP-4 Mobile speaker .....	31.99
T-9021810 Extra DC cable .....	12.99
YSK-8900 Remote separation kit .....	54.99
<b>FT-8900R</b> 50w 10m/6m/2m/35w 440 FM Xcvr .....	439.99
ADMS-2H Windows programming software .....	38.99
CT-39A Packet cable .....	9.99
MLS-100 Mobile speaker .....	45.99
MMB-62 Remote front panel mounting bkt .....	39.99
MMB-66 Quick release mobile mtg bkt .....	39.99
SP-4 Mobile speaker .....	31.99
T-9021810 Extra DC cable .....	12.99
YSK-8900 Remote separation kit .....	54.99
ADMS-2G Windows prog soft; FT-7100M .....	29.99
YSK-7100 Rem separation kit; FT-7100M .....	59.99
<b>FT-90R</b> 50/35w 2m/440 micro FM Xcvr .....	369.99
ADMS-2E Windows programming software .....	38.99
MLS-100 Mobile speaker .....	45.99
RA-0131900 Extra mobile bracket .....	4.99
SP-4 Mobile speaker .....	31.99
T-9021810 Extra DC cable .....	12.99
YSK-90 Remote separation kit .....	54.99
ADMS-2D Prog soft; 3000/8000/8100/8500 .....	38.99
FRG-20 DTMF pager; 2400M/2500M/7400H .....	49.99
FTS-17A CTCSS decode unit; FT-3000M .....	39.99
FTS-22 CTCSS decode unit; FT-8100R .....	68.99
MEK-2 Mic extnd kit; 8-pin mic; FT-8500 .....	24.99
MH-36C8J Extra TTP mic; late FT-2500M .....	59.99
MMB-48 Extra mobile bracket; FT-2600M .....	16.99
YSK-8100 Rem separation kit; FT-8100R .....	69.99
<b>FT-2800M</b> 65w 2m FM Xcvr w/TTP mic .....	159.99
MLS-100 Mobile speaker .....	45.99
SP-4 Mobile speaker .....	31.99

## Yaesu - continued

## AES Price

<b>FT-1500M</b> 50w 2m FM Xcvr w/TTP mic .....	159.99
ADMS-2F Windows programming software .....	38.99
CT-39A Packet cable .....	9.99
MLS-100 Mobile speaker .....	45.99
RA-0242900 Extra mobile bracket .....	9.99
SP-4 Mobile speaker .....	31.99
T-9021810 Extra DC cable .....	12.99
FP-1023 23A switching ps w/fan, 25A surge .....	159.99
FP-1030A 25A ps, 30A surge w/meters .....	249.99
HRI-100 WIRES II interface box .....	149.99
LF-1 Mobile 13A DC noise filter .....	26.99
MLS-100 Mobile speaker .....	45.99
SP-4 Mobile speaker .....	31.99
<b>VXR-7000VA</b> /Vertex 50w 2m FM AC/DC rpt .....	1269.99
Repeaters require service dept set-up; \$80 minimum	
<b>Accessories for FT-26/415/416/530</b>	
CA-8 2 chg sleeves; NC-50/FT-416/530 .....	\$ .49
FBA-12 AA cell holder .....	19.99
<b>Accs for FT-23/33/73/411/811/470/911</b>	
CA-7 2 charging sleeves; NC-50/411E/470 .....	\$ 4.99
CSC-245 Soft case; FT-23/33/73 w/FNB-12S .....	19.99
CSC-28 Soft case; FT-23/33/73 w/FNB-12S .....	1.99
CSC-35 Soft case; FT-411/811/911/FNB-17 .....	.49
FBA-17 AA battery holder .....	19.99
FNB-12S 12v 600mah 5w battery .....	55.99
FNB-17 7.2v 600mah battery .....	34.99
FTT-4 DTMF (TTP) unit for FT-23/33/73 .....	.99
MH-34C2B Compact lapel speaker/mic .....	14.99
NC-28B Wall charger for FNB-17 .....	9.99
NC-34B Wall charger for FNB-14 .....	2.99
NC-65B/NC-18B Wall charger for FNB-12S .....	4.99
PA-6 Mobile DC adapter/cgr; FNB-14/17 .....	9.99
YH-2 Lightweight VOX headset w/mic .....	19.99
<b>FT-50RD/41E</b> 5w 2m/440 HT/FNB41/FT-12 .....	219.99
ADMS-1E Windows programming software .....	38.99
CA-15 Charging stand; FT-10/40/50 .....	27.99
NC-60B Wall charger; FNB-40/41/CA-15 .....	14.99
CLIP-10 Spring loaded belt clip .....	7.99
CN-3 BNC to SMA adapter; FT-50R .....	8.99
CSC-68 Soft case; FNB-41/FBA-15 .....	16.99
CSC-69 Soft case; FNB-40 .....	2.99
CSC-V10 Cordura soft case; FT-10/40/50 .....	27.99
CT-27A Cloning cable .....	11.99
CT-53 Packet cable .....	9.99
EDC-58 DC adapter w/noise filter .....	24.99
EDC-6 DC cord; plug & wire only .....	6.99
FBA-15 4-AA battery holder .....	19.99
FBA-21 6-AA battery holder .....	38.99
FEF-10 Earphone .....	9.99
FNB-41 9.6v 600mah 5w battery .....	58.99
FNB-42 9.6v 1100mah 5w battery .....	62.99
FNB-V47 7.2v 1100mah battery w/belt clip .....	55.99
PA-17 Battery cable extender .....	39.99
LCC-10C Leather case/belt clip; 50/FNB41/V47 .....	19.99
LCC-10S Leather case/swivel; 50/FNB41/V47 .....	31.99
MH-30C2B Speaker/mic; use CT-30 also .....	29.99
MH-34B4B Speaker/mic .....	30.99
MH-37A4B Earpiece/microphone .....	30.99
NC-50 1-hour dual slot charger .....	92.99
CA-14 2 charging sleeves; NC-50 .....	26.99
VC-25 VOX headset .....	62.99
<b>Accessories for FT-11R/41R/51R</b>	
FBA-14 AA battery holder .....	\$ 19.99
FNB-33 4.8v 1200mah battery .....	39.99
NC-55B Wall charger for FNB-31 .....	2.99
<b>VX-150R</b> /Vertex 5w 2m HT/batt/cgr/16key TTP .....	119.99
ADMS-1F Windows programming software .....	38.99
CN-3 BNC to SMA adapter .....	8.99
CT-27A Cloning cable .....	11.99
CT-44 2-pin spkr/mic adapter .....	11.99



**Yaesu - continued** **AES Price**

CT-53 Packet cable .....	9.99
EDC-5B DC adapter w/noise filter .....	24.99
EDC-6 DC cord; plug & wire only .....	6.99
FBA-25 6 AA cell battery case .....	29.99
FNB-V57 7.2v 1100mah battery .....	57.99
FNB-64 Extra 7.2v 700mah battery .....	43.99
LCC-150/TT Leather case .....	23.99
LCC-150S/TT Leather case w/swivel .....	31.99
MH-34B4B Speaker/mic .....	30.99
MH-37A4B Earpiece/microphone .....	30.99
NC-72B Extra wall charger .....	18.99
VAC-400B 1-hour desk top rapid charger ..	56.99
VC-25 VOX headset .....	62.99
VX-1R 500mw 2m/440 submini HT/lith ion D	139.99
ADMS-1E Windows programming software ..	38.99
CN-3 BNC to SMA adapter .....	8.99
CSC-71 Soft case for VX-1R .....	19.99
CT-44 2-pin spkr/mic adapter .....	11.99
CT-53 Packet cable .....	9.99
EDC-15 DC adapter .....	38.99
FBA-20 Battery holder .....	22.99
FEP-10 Earphone .....	9.99
FNB-52LI Extra 3.6v 700mah lith ion batt	36.99
MH-34B4B Earpiece/mic .....	30.99
MH-37A4B Earpiece/microphone .....	30.99
NC-66B Extra 2 hour wall charger .....	18.99
VC-25 VOX headset .....	62.99
VX-2R* 1.5w 2m/1w 440 submini HT/lith ion	189.99

**\*\$20 rebate from Yaesu thru 12/31/03!**

CN-3 BNC to SMA adapter .....	8.99
CSC-90 Soft case .....	16.99
CT-27A Cloning cable .....	11.99
CT-44 2-pin spkr/mic adapter .....	11.99
EDC-21 DC adapter .....	36.99
FNB-82LI Extra 3.7v 1000mah lith ion batt	32.99
MH-34B4B Speaker/mic .....	30.99
MH-37A4B Earpiece/microphone .....	30.99
VC-25 VOX headset .....	62.99
VX-5R Black 5w 6m/2m/4.5w 440 HT/lith ion	249.99
VX-5RS Silver 5w 6m/2m/4.5w 440 HT/lith ion	249.99
ADMS-1E Windows programming software ..	38.99
CD-15 Charger stand (use with NC-72B) D	24.99
CD-15A Charger stand (use with NC-72B)	29.99
CN-3 BNC to SMA adapter .....	8.99
CSC-73 Soft case .....	19.99
CT-27A Cloning cable .....	11.99
CT-44 2-pin spkr/mic adapter .....	11.99
CT-53 Packet cable .....	9.99
EDC-5B DC adapter w/noise filter .....	24.99
EDC-6 DC cord; plug & wire only .....	6.99
FBA-23 2 AA cell battery case .....	29.99
FNB-58LI Extra 7.2v 1100mah lith ion batt	69.99
MH-34B4B Speaker/mic .....	30.99
MH-37A4B Earpiece/microphone .....	30.99
NC-72B Extra wall charger .....	18.99
SU-1 Altitude/barometric pressure sensor ...	35.99
VC-25 VOX headset .....	62.99
VX-7R Silver 5w 6m/2m/440/300mw 220 FM HT	329.99
VX-7RB Black 5w 6m/2m/440/300mw 220 FM HT	329.99
ADMS-1G Windows programming software ..	38.99
CT-91 Microphone adapter .....	10.99
CD-15A Charger stand (use with NC-72B)	29.99
CMP-460A Waterproof speaker/mic .....	54.99
CN-3 BNC to SMA adapter .....	8.99
CSC-88 Soft case .....	14.99
CT-91 Microphone adapter .....	10.99
EDC-5B DC adapter w/noise filter .....	24.99
EDC-6 DC cord; plug & wire only .....	6.99
FBA-23 2 AA cell battery case .....	29.99
FNB-80LI Extra 7.4v 1300mah lith ion batt	65.99
MH-57A4B Speaker/mic .....	30.99

**Yaesu - continued** **AES Price**

NC-72B Extra wall charger .....	18.99
SU-1 Altitude/barometric pressure sensor ...	35.99
VC-27 Earpiece/microphone .....	30.99
<b>ANTENNA ROTORS</b>	
G-450A 10 sq ft antenna rotor/5-wire .....	259.99
G-550 12 sq ft elevation rotor/6-wire .....	299.99
G-800SA Med/hvy duty 450 degree 17sq ft/5-wire	339.99
G-800DXA Med/hvy duty 17sq ft/presets/5-wire	429.99
G-1000DXA HD 450 degree 23sq ft/presets/6-wire	519.99
G-2800DXA HD 450 degree 34sq ft/presets/6-wire	1139.99
Note: G-2800DXA comes w/40m (131') of rotor cable	
G-5500 11 sq ft azimuth/elevation rotor/2x6-wire	629.99
GA-3000 Tower absorber joint; G-1000/2800 D	119.99
GC-038 Mast clamp; G-450/800/1000/5500	31.99
GC-048 Mast clamp; G-2800 .....	47.99
GL-33 Mast adjustment plate .....	14.99
GS-050 50mm thrust bearing; mast 1 1/4"-2" ...	31.99
GS-065 65mm thrust bearing; mast 1 1/4"-2 1/2"	47.99
GS-232A Computer interface; DXA rotors .....	539.99
C-1000 Interface cable; GS-232A -SDX/G5500	29.99
GC-680U Universal self-adjusting mast bearing	99.99
Sep Kit Separation kit for G5500 .....	23.99

**See BELDEN for rotor cable**

**CONSUMER ELECTRONICS**

VXA-150 Pro V 5w air handheld .....	Δ \$269.99
VXA-150 Deluxe Pro V 5w air handheld .....	299.99
VXA-210 Pilot 5w air handheld w/VOR .....	Δ 299.99
VXA-210 Deluxe Pilot 5w air handheld w/VOR	354.99
VXA-700 Spirit 5w air handheld/2m FM ham	419.99
FNB-53 Nicad battery pack; Yaesu FRS .....	Δ 2.99

**CLOSE-OUTS**

ALI DJ-596T 5w 2m/440 FM HT/NiMH/cgr/TTP	\$209.99
ALI DJ-X2T 522KHz-1GHz cc size Rwr/lith ion/cell bldk	199.99
ALI DR-135TP Black 50w 2m FWT/1200/9600 TNC	269.99
ALI DR-435T Black 35w 440 FM Xcvr/TTP mic ..	259.99
B&W AC-5-30 5-30 MHz 65' folded dipole .....	179.99
B&W ACS-5-30 5-30 MHz stainless 65' folded dip	269.99
B&W AS-20 20/15/10m 20' trap dipole ant ..	99.99
B&W AS-40 40/20/15/10m 40' trap dipole .....	149.99
B&W AS-160 160/80/40/20m 137' trap dipole	149.99
B&W AT-55 40/20/15/10m 55' trap dipole .....	89.99
B&W AT-110 80/40/20/15/10m 110' trap dipole	99.99
B&W AXS-160 160/30m 96' trap dipole ant ..	69.99
B&W AXS-80 80/40/15m 65' trap dipole ant ..	99.99
B&W BWDS-1.8-30 1.8-30 stainless 90' folded dip	319.99
BEL 8018 #8 alum grid wire .....	500 ft. Roll 69.99
BEL 9251 RG-8A (non-contam) .....	500 ft. Roll 279.99
BEN BY-3 Iambic keyer paddle, gold plated ..	299.99
BUS 78-0040 90mm refractor telescope .....	399.99
BUS 78-0103 1.25" erecting prism .....	69.99
BUS 78-0200 4.5" reflector telescope .....	269.99
BUS 78-8000 8" Dobsonian reflector telescope	349.99
BUS 78-9470 60mm refractor telescope/zoom	129.99
CEL 11015 Celestar 8 telescope .....	999.99
CEL 11051 G-5 w/motor drive telescope .....	679.99
CEL 21072 Firstscope 80 EQWA refractor telesc	199.99
CEN B41Y10-50 4:1 3kw PEP balun for yagi ..	69.99
CEN B41LW10-50 4:1 ladder line to coax balun	69.99
CMT CQ-5M Dlx black QD trunk lip mt/coax ..	66.99
CMT CYA-2412 2.4G 12sl 15.5db 2" 6" bm N beam	129.99
CMT DS-15 6m/2m/440/900/1.2 discone ant ..	69.99
CMT GP-24S 2.4GHz 9.9db 3' 7" N base/rptr	99.99
DIA F-718L 420-430 11.5db ATV N base ant	169.99
GAR 010-10215-03 Mapsource Metroguide CD	99.99
GAR NavTalk Analog cell phone/GPS combo ..	199.99
GAR StreetPilot 12ch dash mt mapping GPS ..	399.99
HAL DXP-38 External DSP HF radio module ...	369.99
HEI HM-1 Studio condenser mic; lcom .....	89.99
IAC 40m-S 40m half sloper 33' antenna .....	69.99
IAC BC-119-N21 Nicad/NiMH desk cgr; T81A ..	99.99

**Close-Outs - continued** **AES Price**

ICO BP-8 8.4v 800mah long life battery .....	99.99
ICO BP-83 7.2v 600mah battery .....	79.99
ICO BP-84 7.2v 1000mah battery .....	99.99
ICO BP-199 6v 700mah NiMH battery; T81A	69.99
ICO BP-200L 9.6v 760mah NiMH batt; T81A	89.99
ICO EX-1759 Infrared receiver .....	99.99
ICO FL-96 2.8 KHz 455 KHz IF SSB filter .....	139.99
ICO FL-102 6 KHz 9 MHz IF AM filter; 775DSP	79.99
ICO HM-90A Wireless microphone .....	119.99
ICO IC-26XAT/HP 7w 2m HT/batt/cgr/TTP .....	249.99
ICO RS-746 Win remote control software .....	69.99
ICO UT-66 Voice synthesizer; IC-775DSP .....	69.99
ICO UT-84 Tone squelch unit; 2700H/821H .....	89.99
ICO UT-86 Tone squelch; IC-706 Mk II only .....	69.99
ICO UT-89 Tone scan/decode unit; IC-2350H	89.99
KEN DRU-2 Digital recording unit; TS-950SDX	139.99
KEN PB-33 6v 1200mah battery; TH-22ATH ..	89.99
KEN PB-34 9.6v 600mah 5w batt; TH-22ATH	89.99
KEN SP-950 Ext spkr/audio filters; TS-950SDX	149.99
KEN TH-22ATH 5w 2m FM HT/batt/cgr/TTP .....	199.99
KEN UBZ-LH14BK Deluxe FRS black handheld	69.99
KEN YG-455C-1 500 Hz CW filt; TS-450/690	149.99
LAC WS-8015U Dlx sun/moon wireless WX stn	159.99
MAG Meridian GPS GPS base map base map	169.99
MAG Meridian XL GPS/plotter/detachable ant ..	89.99
MAH MH-C777 Plus Univ cgr/analy; lith/vnicd/nimh	69.99
MAH PR-212DNDM 2m/440 6/8.5db 85" NiMH	79.99
MEA 07436 #497 Autostar controller; ETX-125EC	119.99
MFJ 781 DSP filter for any TNC or controller ..	89.99
MFJ 1756 6m DX vertical antenna .....	69.99
MFJ 9117B 9017 Xcvr/tuner/ps/ant package	199.99
MFJ 9130B 9030 Xcvr/tuner/ps/ant package	249.99
MFJ 9140B 9040 Xcvr/tuner/ps/ant package	269.99
MIR C-5022G 220 FM/SSB 50/200w amp/pre	369.99
MIR KP-1/10M 10m in shack preamp .....	119.99
MIR KP-1/220 220 in shack preamp .....	119.99
MIR KP-2/10M 10m mast mount preamp .....	129.99
MIR KP-2/220 220 mast mount preamp .....	139.99
MIR MP-3 420-450 5/50/150w PEP wattmeter	229.99
MSQ 2M-XP20 144-146 13.3db 10h/10v cross polar	179.99
MSQ 2M-XP28 144-146 15.1db 14h/14v cross polar	249.99
MSQ 222-XP30 220 15.2db 15h/15v cross polar	199.99
MSQ EB-432 432 Eggbeater antenna .....	119.99
MSQ FAST MAST 20' extended port alum mast	129.99
PAC Spirit-2 Std high performance controller ..	199.99
PLY CS3-100 100' 3" copper strap .....	159.99
SAN ATS-818 AM/FM/shortwave port Rcvr .....	179.99
SAN ATS-818CS AM/FM/SW port Rcvr/cassette	219.99
SGC 52-34 RS-232 interface; SG-2000 Xcvr ..	129.99
SGC 53-04 PS-30 30A/40A peak unreg ps .....	319.99
SGC 55-04 SG-103 2-28 MHz 90' 150w dipole	199.99
SGC 55-48 QMS-3 500w antenna system .....	1999.99
SUA MP-1 Portable 150w 7-50Mhz antenna ..	129.99
UNI HH-940P 1w submersible VHF marine HH ..	99.99
YAE ATS-100 HF/6/2/430 motorized mob ant	269.99
YAE FEX-736-220 220MHz module; FT-736R	309.99
YAE FT-1000 Mini HF/6m/2m/440 Xcvr .....	949.99
YAE FT-1000D Deluxe HF Xcvr/ps .....	3999.99
YAE FTS-22 CTCSS decode unit; FT-8100R .....	68.99
YAE GA-3000 Twr absorber joint; G-1000/2800	119.99
YAE VX-1R 500mw 2m/440 submini HT/lith ion	139.99
YAE VXA-150 Pro V 5w air handheld .....	269.99
YAE VXA-210 Pilot 5w air handheld w/VOR .....	299.99
YAE XF-117CN 300 Hz CW filter; FT-100 .....	99.99
YAE YSK-8100 Rem separation kit; FT-8100R	69.99





## USED EQUIPMENT

- Fully Service Tested trade-ins
- 10-day Trial (pay only shipping charge)
- 30 Day Guarantee
- Full Trade-in Credit within 90-days on Higher-Priced New Equipment

## DEMO EQUIPMENT

- Fully Serviced Tested New Demonstrator or Display Equipment
- Repacked in Original Cartons
- Manufacturer's Warranty

Please be aware that there may be instant coupons that apply to Demo equipment which are not reflected in the displayed price. Coupons will be applied to your final total. Ask a salesperson for coupon availability. Used Equipment policies do not apply to Demo equipment

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LOCATION CODES (m) Milwaukee 1-800-558-0411; (c) Cleveland 1-800-321-3594; (f) Orlando 1-800-327-1917; (v) Las Vegas 1-800-634-6227

## USED EQUIPMENT

A (+) at the end of the equipment description indicates there are additional options included.

<b>ALINCO</b> DX70TH HF XCVR/6M.....439.99f ED6C CHARGER.....9.99m MOBILE HAND MIC /TTP.....39.99f	<b>AMERITRON</b> AL80A 1KW HF AMPLIFIER 749.99f AL811 600W HF AMPLIFIER 479.99m	<b>AOR</b> AR16B RCVR.....159.99m AR8200B WIDEBAND RCVR 429.99c AR8600 WIDEBAND RCVR 599.99v	<b>BENCHER</b> RJ BLACK HAND KEY.....79.99f	<b>CHEROKEE</b> AH27 CB HT (LIKE NEW).....49.99c	<b>COURIER</b> M54 151.625 MHZ HT.....79.99m	<b>DIAMOND</b> K400C HATCH/TRUNK MT.....54.99v	<b>KENWOOD</b> AT50 AUTOMATIC TUNER.....259.99c BC19 RAPID CHARGER.....51.99f PS40 20A SWITCHING PS.....124.99m PS430 POWER SUPPLY.....149.99m PS53 POWER SUPPLY.....179.99m SP430 SPEAKER/SCRATCHED.....44.99c TL922A 2XN HF AMPLIFIER 1,349.99c TM17A 2M/440 XCVR.....329.99m TS570D HF XCVR.....399.99c TS450S/AT HF/WORN PANEL.....569.99m TS811A 70CM FM/SSB.....449.99f TS811A /SCRATCHED.....429.99m TS940S/AT/SOT/YK88C1+.....949.99c TS950SDX HF XCVR.....2,299.99c	<b>MFJ</b> 212 TUNE-UP HELPER.....59.99f 407C ELECTRONIC KEYS.....59.99f 462B MULTI READER.....135.99f 493 MEMORY KEYS.....103.99f 704 LOW PASS FILTER.....39.99f 949E ANT TUNER/RUFF TOP.....89.99m 962D ANTENNA TUNER.....199.99m	<b>MIDLAND</b> 75510 FRS XCVR.....49.99f	<b>NG</b> MH900PK EAR/MIC.....29.99c	<b>PALOMAR</b> PT340 TUNER-TUNER.....79.99m	<b>RANGER</b> RC10Q540X 6M FM/SSB.....214.99m	<b>SGC</b> PS30 30/40 UNREG PS.....319.99c 0411 REMOTE HOOK.....471.99f 0501 SG2020 HF XCVR.....469.99m 5418 SG237 SMARTUNER.....249.99m	<b>STANDARD</b> C1208DA 2M XCVR.....359.99c	<b>UNDEN</b> HH985 SW 90CH MARINE HT.....99.99m	<b>VECTRONICS</b> CK2000 DELUXE KEYS.....53.99c VC3000 ANTENNA TUNER.....139.99m	<b>YAESU</b> CA10 2 CHARGE SLEEVES.....9.99c CD24 CHARGER.....104.99f CSC29 SOFT CASE.....14.99c CSC62 SOFT CASE.....9.99c CSC67 SOFT CASE.....9.99c FB43 CHARGING SLEEVE.....19.99c FC30 AUTO TUNER.....189.99m FL7000 HF AMPLIFIER.....1,679.99m FP1023 PWR SUPPLY.....127.99m FRG100B SWL RCVR.....374.99m FT1000 W/BFP1.....2,374.99m FT1000D HF XCVR.....2,699.99m FT1000PMKY XCVR.....2,099.99m FT50RD/41B 2M/440 HT+.....175.99f FT817 XCVR.....499.99m FT8500 XCVR/SEP KIT.....179.99m FT920 XCVR/YF116A.....819.99m FT990 AC HF XCVR.....1,129.99m FT990 AC XCVR/SCRATCHED.....1,099.99m FT990D HF XCVR.....899.99m MM667 MOUNT.....19.99m NC26B CHARGER.....4.99m NC34B CHARGER.....9.99m PA26B ANTENNA, CD24.....69.99m SP7 SPEAKER.....29.99m VC25 VOX HEADSET.....39.99f YM50 MICROPHONE.....39.99m	<b>EM514 MICROPHONE</b> .....99.99m EMS49 SPEAKER/MIC.....29.99c EMS51 HEADSET.....34.99m ESC18 CASE.....9.99m	<b>ALPHA DELTA</b> DLT42CN 4 POS "N" SWITCH 134.99v PATHMINDER SWITCH.....134.99m	<b>AMECO</b> HP300T HIGH PASS FILTER.....8.99v P12T AC ADAPTER.....8.99c TPA PREAMP.....69.99m 107PC2 CODE SOFTWARE.....24.99m	<b>AMERITRON</b> AL800H 1.5KW HF AMP.....2,159.99f AL811 600W HF AMPLIFIER 539.99v ARB702Y INTERFACE RELAY 34.99m AWM30 SWR/WATTMETER.....124.99m RCS8V REMOTE SW 230V.....139.99m	<b>AOR</b> AR16B RCVR.....179.99m AR3000A WIDEBAND RCVR 989.99m AR3000A RCVR/NO ANT.....89.99m AR8200B WIDEBAND RCVR 429.99m AR8200MKIIB RCVR.....499.99m SC8200P CASE.....9.99m TDF370 DSP UNIT.....299.99m	<b>ARRL</b> 242 OPER MANUAL CD ROM 34.99v	<b>ASTATIC</b> TUG9104 DESK MIC.....84.99f	<b>ASTRON</b> RS10A 7A POWER SUPPLY.....59.99f RS12A POWER SUPPLY.....71.99c RS20A POWER SUPPLY.....89.99m RS41 3A POWER SUPPLY.....44.99v VS35M POWER SUPPLY.....169.99m	<b>B&amp;K</b> 114A MULTIMETER.....34.99m	<b>B&amp;W</b> AS160 160-20 DIPOLE.....139.99c AS40 40-10 TRAP DIPOLE.....139.99c	<b>BAYGEN</b> FP43 BULBS.....6.99m	<b>BENCHER</b> BY3 VAMBC KEYS PADDLE 249.99m YAW 1KW LO-PASS FIL190.....76.99v	<b>BMI</b> 972A 12 HR WALL CLOCK.....14.99f	<b>BUSHNELL</b> 17-7351 7X35 BINOCULAR.....34.99m	<b>BUTTERNUT</b> CPK COUNTERPOISE KIT.....116.99c	<b>CELESTRON</b> NEXSTAR 5 TELE/TRIPOD.....799.99f 11031 NEXSTAR 5 SCOPE.....899.99f	<b>CENTAU</b> B11W1050 1.1 BALUN.....48.99m	<b>CS</b> S68 PRIVATE PATCH.....199.99m	<b>CHANNEL MASTER</b> 9515A ROTOR/KNOB.....99.99m	<b>COAXIAL DYNAMICS</b> 82007 ELEMENT.....79.99m	<b>COBRA</b> FRS200 FRS HT.....34.99m 148NWST CB XCVR.....159.99m 19 ULTRA II CB XCVR.....39.99f 25LTD CLASSIC CB XCVR.....79.99c 25WXXNST CB XCVR.....99.99m	<b>COM SPEC</b> DTD-1 DTMF DECODER.....44.99c ID8 AUTO MORSE ID BOARD 64.99m	<b>COMET</b> CK5N "N" MOUNT.....39.99m GR5M TKN LP W/COAX.....60.99m M24M 2M/440 MAG ANT.....34.99m	<b>COURIER</b> M54 151.625 MHZ HT.....49.99c U22/A 462.575 MHZ HT.....49.99m U22/B 462.625 MHZ HT.....49.99m	<b>CONNECT SYSTEMS</b> CS800 MANUAL.....7.99v	<b>CUSCHCRAFT</b> ARX6 26' 6M RINGO ANT.....129.99f A627013S 6Z/440 YAGI.....161.99c MA5V 5 BAND VERTICAL.....179.99v X740 40M ADD-ON KIT.....287.99v 224W 220 MHZ BOOMER.....64.99m	<b>DAIWA</b> CN801H SWR/PWR METER 134.99mcl CS401N 4-POS "N" SW.....119.99f	<b>DAVINI</b> 7852 RAIN COLLECTOR.....69.99f 7400 PERCEPTION II.....125.99m 7852 RAIN COLLECTOR.....59.99m	<b>DCI</b> 223 53H 220 MHZ BP FILT.....99.99f	<b>DIAMOND</b> K400 HATCH/TRUNK MOUNT 29.99f K412CNMO MOUNT.....54.99m K540 MIRROR/RACK MT.....28.99v K540KM MIRROR/RACK MT.....53.99v K550KM LUGGING RK MT.....62.99v K600M TRUNK MOUNT.....49.99m K601M MOUNT.....62.99m K601NM MOUNT.....59.99v K702M HD MAG MT.....44.99v SPM-NMO HD NMO MAG MT 39.99v X700NHA 2M/440 BASE ANT 299.99f	<b>DRAKE</b> MS-8 SPEAKER.....53.99m	<b>ECG</b> TB105 THRUST BEARING.....15.99m	<b>EMERSON</b> EAN3400 TV ANTENNA.....24.99m EVS5000 A/V EXTENDER.....24.99m	<b>GAP</b> HEARIT DSP SPKR.....144.99m TITAN DX 8 BAND VERTICAL 288.99v	<b>GARMIN</b> E-MAP DELUXE.....188.99m GPSV DELUXE GPS.....359.99m GPS12XL GPS.....199.99m GPS38 GPS RCVR.....149.99f 0101020300 CIG/LIGHT CABL 35.99m	<b>GENESYS</b> TOSK THROAT MICROPHONE 39.99m	<b>GROTHE</b> VS4 P/A EMERGENCY SIREN 124.99m	<b>GRUNDIG</b> G2000A SW RCVR.....89.99m MINIWORLD 100PE SW RX.....26.99m SATELLIT 800 SW RCVR.....499.99c S350 RCVR.....89.99m TRAVELLER VII SW RCVR.....89.99m TRAVELLER II SW RCVR.....44.99m TRAVELLER III SW RCVR.....89.99c YB400PE SW RCVR.....134.99f	<b>HAL</b> DXP38 DSP HF MODEM.....332.99f	<b>HEIL</b> AD1K CABLE/KENWOOD.....15.99v BM55 MIC/HOST/HCS.....62.99v CC1K KENWOOD APPAT CABLE 27.99v GMV VINTAGE MIC/XFMR.....139.99c HCL5 CLASSIC MIC.....199.99mcl HDAT HEADPH ATTENUATOR.....5.39v HM105 HNDROM/ICOM.....52.99c HM10C MICROPHONE.....59.99c PROSIC BOOMSTAND/ICOM.....124.99c TB1 MIC STAND.....22.99c	<b>HUSTLER</b> C32 CHROME BALL.....10.99m G71504 2M ANTENNA.....179.99m MO1 MAST/NONE/NO BOX.....28.99m NMO MAG MT (AS-IS).....32.99f RTM 25" MAG MT CB ANT.....14.99v SSM1 SS BALL & SPRING.....42.99c	<b>HYGAIN</b> AR40 3 SQ FT ANT ROTOR 249.99m	<b>ICOM</b> AD51 CHARGE ADAPTER.....9.99mcl AD56 CHARGE ADAPTER.....12.99v AD81 CHARGE ADAPTER.....12.99m AD87 CHARGE ADAPTER.....7.99m AH28 HARDWARE/NO WHIP/159.99m AT180 ANTENNA TUNER.....329.99m BA12 ADAPTER.....19.99f BC119 01 CHARGER.....76.99f BC119(11) DESK CHARGER 62.99c BC119(31) DESK CHARGER 89.99c BC119N(21)/AD87 CHGR.....94.99c BC119N11 DESK CHARGER 79.99m BC127A CHARGER.....18.99m BC135 CHARGER.....69.99m	<b>BC144(01) CHARGER</b> .....80.99m BP132 BATTERY.....79.99m BP157 BATTERY.....59.99c BP170 BATTERY CASE.....31.99v BP173 BATTERY.....89.99m BP198 BATTERY.....49.99m BP209 BATTERY.....44.99m BP211 BATTERY.....79.99m BP5 SW BATT.....71.99f CP13 CIG ADAPTER.....34.99m CP13L CIG ADAPTER.....34.99m CP17L CIG ADAPTER.....19.99m CSWHHA SOFTWARE/CABLE 44.99m CSWR10 SOFTWARE.....40.99c HM12 HAND MICROPHONE.....67.99v HM46 SPEAKER MIC.....40.99c HM77A MICROPHONE.....109.99v HM90A WIRELESS MIC.....119.99m HM92A MICROPHONE.....89.99m HS10SA HEADSET.....59.99m HS51 HEADSET.....84.99m HS85 HEADSET.....79.99m IC-7HT 6W 2M/440 HT.....169.99m ICF21GM GMR/FRS HT.....134.99c ICQ7ABC 2M/440 XCVR.....107.99c ICT22A HT/SPK-MIC/CP12 259.99v ICT22A SW 2M HT.....179.99mcl ICT90A SW 6Z/440 HT.....239.99m ICV8 5.5W 2M HT.....114.99c ICW32A SW 2M/440 HT.....239.99m IC26XAT 3W 2M HT.....189.99c IC208H 2M/440 FM XCVR.....296.99f IC2720H 2M/440 FM XCVR 341.99f IC4008A FRS HT.....69.99m IC703 10W HF XCVR.....599.99m IC706MKIIG HF/VHF/UHF.....719.99f IC746PRO HF/VHF/ICV.....1,439.99m IC910H 2M/440 XCVR.....989.99c LCF21L LEATHER CASE.....34.99v LC128 CASE.....34.99m LC137 CASE.....34.99c LC174 CASE.....19.99m LC148 CASE.....22.99c MB62 BRACKET.....23.99c MB65 BRACKET.....29.99m MB85 BRACKET.....19.99m OPC023A POWER CABLE.....14.99f OPC18A POWER CORD.....24.99m OPC59B CABLE/AT180.....65.99v PCR100002BON RCVR.....339.99m PS85 POWER SUPPLY.....239.99m R2(06) WIDEBAND HH RX.....89.99f R5(06) WIDEBAND HH RX.....179.99v R75 SW RECEIVER.....539.99f SM20 DESK MICROPHONE.....179.99c SP13 EARPHONE.....3.99v SP20 SPEAKER.....209.99m SP7 SPEAKER.....85.99v UT63 BOARD.....14.99m UX910 1.2 GHZ MODULE.....449.99c
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This Used and Demo Equipment inventory is as of 9/4/2003  
A current list is available at [www.aesham.com](http://www.aesham.com) or Call Toll Free



## DEMO CONTINUED

<b>IDIOM PRESS</b>	125 24 CLOK/CALENDAR.....26.99c
HK-3 I/O HOOK UP KIT.....9.99v	1272MYH TNC/MIC SWITCH.....35.99v
K3 LOGIKEY CW KEYS.....116.99v	1272MZ TNC/MIC SWITCH.....25.99f
<b>INTERNATIONAL ANTENNA</b>	1275 SOUND CARD INTERFACE.....89.99f
160M HALF-SLOPER.....124.99m	1279M SOUND CARD INTERF.....115.99v
<b>JPS</b>	1280 CLOCK.....49.99m
NIR10 FILTER.....79.99m	1285 IBM SOFTWARE.....14.99m
<b>KANTRONICS</b>	1289M 3-1/2 IBM SOFTWARE.....53.99m
HOSTMASTERII+ V3.4.....80.99c	1295 5V AC ADAPTER.....9.99m
KAM58 TNC.....359.99v	1312D 12V AC ADAPTER.....12.99m
KPC3-4/128K.....168.99m	1315 ADAPTER.....9.99f
KPC9612UPGRADE ONLY.....19.99m	1730 2M ROLL-UP VERTICAL.....17.99v
<b>KENWOOD</b>	297 DESK MIC.....62.99c
EXTRA HEAD BRKT/TMD700.....9.99v	4114 POWERPACK.....59.99m
BC17 220V WALL CHARGER.....9.99f	422D KEYS/PADLE.....139.99m
EMC3 LAPEL CLIP MIC/EAR.....26.99v	4245MC POWER SUPPLY.....169.99m
HMC3 VOX/BOOM MIC.....53.99c	44 SCOPE TUNE.....13.99c
KNB7A BATTERY.....69.99m	45B 128K RAM IC.....4.99f
KSC8 CHARGER (220V).....19.99f	490 PADDLE/KEYER.....169.99mv
MC520M 8 PIN TT MIC.....71.99m	498X KEYS.....134.99m
MC580M TT MIC.....71.99v	5024B CABLE.....12.99f
MC60A DESK MIC.....134.99mv	5080 MFJ TNE/YAE 8P CBL.....9.99m
PB33 BATTERY.....80.99v	5084 MFJ TNC/COM 8P CBL.....13.99m
PB39 BATTERY.....49.99m	5086 KEN/ALI 8-PIN CBL.....12.99v
PG3E CIGARETTE CORD.....8.99m	5086YH KAM HF KEN 8P.....12.99v
PG4X CABLE EXTENSION.....62.99c	5383Y YAE INTERFACE CBL.....35.99v
PS40 POWER SUPPLY.....134.99m	5397Y YAE 8-PIN CABLE.....14.39c
TS200X HF/HF/40V XCVR2,069.99m	5397YM YAE MOD CABLE.....14.39c
TS50S HF XCVR.....569.99m	64113 CHARGER.....44.99m
TS870S HF XCVR.....2,069.99m	641K BAT CHARGER.....44.99v
TS870S HF XCVR/SO2.....2,119.99f	8121 AM/FM/SW PORTABLE.....34.99m
UBZAL148X FRS/NEW.....24.99m	924 440MHZ ANT TUNER.....62.99v
<b>KOSS</b>	931 ARTIFICIAL GROUND.....79.99m
GT/3 HEADPHONES.....4.99m	9406X 10W 6M SSB XCVR.....224.99m
<b>LARSEN</b>	9420X 12W 20M SSB XCVR.....199.99m
KG144UDPL 2M GLASS MT.....69.99c	948 300W ANTENNA TUNER.....107.99v
NMO05PEC 136-512 ANT.....12.59v	986 2KW ANTENNA TUNER.....269.99m
NMOTLP TRUNK LIP MOUNT.....26.99v	<b>MGE</b>
NMO150B 2M ANT.....29.99m	HFS1 SPEAKER.....7.99m
NMO150TLM 2M ANT/TRNK MT.....49.99v	<b>MIDLAND</b>
NMO440C UHF ANTENNA.....24.99m	22430 THROAT/MIC.....29.99m
<b>LDG</b>	74200 WX RCVR.....44.99m
AT11MP HF AUTO TUNER.....199.99m	74210 WX RCVR.....49.99m
RTICCABLE INTERFACE CAB.....18.99f	75510 FRS RADIO.....29.99c
RT11 HF REMOTE TUNER.....179.99m	<b>MIRAGE</b>
<b>LIGHTWAVE</b>	BD156 2M 2/150W AMP.....269.99mv
LW-HT HEADTORCH.....35.99v	B23 2M 2/30W AMP.....89.99f
LW3000 7 LED FLASHLIGHT.....44.99v	B23G 2M 2/30W AMP.....119.99v
<b>MAGELLAN</b>	B24G 2M 5/50W DOCK/AMP.....99.99m
GPSTRACKER GPS.....134.99m	B2516G 2M 25/160W AMP.....299.99m
MERIDIANX GPS.....149.99m	B310G 2M 4/100W AMP.....159.99f
0069038000 PC KIT.....89.99m	B34 2M FM 2/30W AMP.....62.99v
<b>MAHA</b>	B510G 2M 100W HT AMP.....188.99m
MHA102 2M 35W AMP.....62.99c	D26N 440 2/60W AMP.....234.99m
MHP132 BATTERY.....49.99m	KP110M 10M RX PREAMP.....114.99m
MHP8H BATTERY.....59.99m	KP16M 6M RX PREAMP.....99.99f
MHC777 CHARGER.....44.99c	KP210M 10M PREAMP.....159.99m
MHC777PLUSI CHGR/ANLY.....79.99f	KP2220 220 RX PREAMP.....159.99m
MHSC800U ADAPTER.....8.99m	MP1 HF 2KW WATTMETER.....197.99f
MHSC803 ADAPTER.....6.99m	MY4 FT10/40/50 ADAPTER.....7.99f
MHS11 ADAPTER.....6.99m	R1 REMOTE CONT HEAD.....39.99m
MH101Y2 CHGR.....59.99m	<b>MOTOROLA</b>
<b>MAXON</b>	50988 FRS.....39.99m
FRS114 FRS HT.....25.99cf	53547 GMRS.....179.99m
GMRS21X GMRS HT.....89.99c	<b>M SQUARED</b>
MX49FX XCVR.....44.99m	2M5440XP 2M/440 YAGI.....179.99c
MX49FX 49 MHZ XCV.....19.99c	<b>POUCH</b>
PC50 40MHZ HT.....19.99m	P5 POUCH.....13.50v
<b>MFJ</b>	<b>RANGER</b>
1026 NOISE CANX ANT.....149.99m	RC29500X 25W 10/12 XCVR.....239.99m
1040B RCVR PRESELECTION.....89.99v	RC129700X 150W 10/12.....359.99c
1118 DLX DC PWR STRIP.....67.99c	<b>RF CONCEPTS</b>
13 2412 Hz HR CLOCK.....17.99c	223 2M 2/30W AMP (NEW).....89.99f
1160C CLOCK.....8.99f	<b>RMS</b>
118 2412 Hz JR JUMBO CLOCK.....22.99c	CN220 HF/220 WATTMETER.....89.99c
1214PC INTERFACE.....124.99m	<b>SANDGAIN</b>
1224 INTERFACE.....89.99m	ATS-404 AM/FM/SW RCVR.....69.99m
	ATS505 AM/FM/SW RCVR.....116.99c

ATS1818S SW RCVR/TPPE.199.99m	CS828 CASE.....12.99m
DIV200V AM/FM/HF TV RX.....59.99m	CT26 CABLE.....19.99m
<b>SGC</b>	EDC12 CIGARETTE ADAPT.....24.99m
0401 SG2000 HF XCVR.....1,439.99v	FC20 ANTENNA TUNER.....242.99c
0501 SG2020 XCVR.....599.99m	FH1 KEYPAD.....79.99m
5296 SG500 HF AMP.....1,124.99v	FIF232C INTERFACE.....84.99m
5304 PS30 POWER SUPPLY.....289.99m	FNB31 BATTERY.....41.99m
5417 SG-231 HF+6W TUNER.....476.99v	FNB41 BATTERY.....52.99c
5422 SG239 TUNER.....161.99c	FNB72 4.5AH BATTERY.....89.99f
7007 POWER CLEAR DSP.....249.99m	FNB78 BATTERY/FT897.....89.99f
<b>SHAKESPEAR</b>	FP1030A 25A PS W/MTRS.....224.99mv
495 MARINE ANT MOUNT.....15.99v	FT1000PMKV 200W HF.....2,699.99f
<b>SHURE</b>	FT1500M 2M 50W XCVR.....143.99m
5267 SERIES II DESK MIC.....111.99v	FT2800M 65W 2M XCVR.....139.99m
<b>SMILEY</b>	FT50R0D/41B 2M/440 HT.....139.99c
270A 2M/440 TELE WHIP.....17.99m	FT7100M 50/35W 2M/440.....395.99f

<b>SONY</b>	AN102 ACTIVE LOOP ANT.....69.99m
ICF5W77 AM/FM/SW PORT RX.....422.99m	ICF6200 AM/FM CRANK RX.....44.99c
ICF6W7600GR SW RCVR.....161.99m	ICF7007 AM/FM/SW RCVR.....359.99mv
ICF5W1000T AM/FM/SW RX.....359.99m	ICF5W30 AM/FM/SW RCVR.....69.99c
ICF5W77 AM/FM/SW RCVR.....419.99m	<b>TERK</b>
LF20 WIRELESS S/V SYS.....79.99m	TV42 TV ANTENNA.....49.99m
TV42 TV ANTENNA.....49.99m	TV50 AMP TV ANT.....71.99v
VR1 TV VOLUME REGULATOR.....44.99mv	<b>TIMESWAVE</b>
ANCA NOISE CANCELLER.....179.99m	<b>TRIPP LITE</b>
PV140 INVERTER.....38.99m	<b>UNIDEN</b>
ATLANTIS SW VHF MARINE HT.....89.99v	BC147XLT SCANNER.....80.99c
BC147XLT SCANNER.....80.99c	BC244CLT SCANNER.....89.99c
BC08XLT SCANNER.....104.99m	PR0538B CB XCVR.....54.99m
SC150 SCANNER.....143.99c	WX500 SAME WX RCVR.....44.99m

<b>VALOR</b>	MM3401B BLK TRI MAG MT.....53.99c
MM3401B TRI-MAG MOUNT.....53.99c	PHF6 6M 58" WHIP.....19.99m
PM144440B BNC MAG MT.....9.99f	<b>VANCO</b>
HF24RS HEADPHONES.....17.99m	370052 DIG MULTIMETER.....17.99c
<b>VECTRONICS</b>	AT100 ACTIVE ANTENNA.....64.99v
DL2500 DRY DUMMY LOAD.....161.99v	HFT1500 ANT TUNER.....359.99f
HPF1 HIGH PASS FILTER.....14.99m	<b>VIBROPLEX</b>
150 SQUARE RACER.....124.99m	153 GOLD STRAIGHT KEY.....249.99m
<b>WEST MOUNTAIN RADIO</b>	RB/M8/C RIGBLASTER.....94.99m
<b>WILSON</b>	WILSON TRUCKER 2000 ANT.....49.99m
W2AU W2DU BEAM BALUN.....23.99v	<b>W4R</b>
OTT1 TUNE CONTROL.....39.99f	<b>X-10</b>
SP-554A MOTION DETECTOR.....26.99v	<b>YAESU</b>
ADMS1E SOFTWARE.....34.99v	ADMS2G SOFTWARE.....34.99v
AD3 2M/440(N) DUPLEXER.....47.99v	ATAS100 MOBILE ANTENNA.....242.99m
CA10 CHARGE ADAPTER.....11.99mv	CD15 CHARGE STAND.....19.99mv
CSC67 CASE.....16.99v	CSC69 FOR FNB40.....13.99m
CSC83 SOFT CASE.....22.99f	

# TRADE & UPGRADE

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SSB & FM Gear!

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A portion of the Used/Demo inventory in Milwaukee

## Please use these lists as a Guide

These Used and Demo Equipment lists are compiled from an actual inventory as of 9/4/2003. However, due to turnover from daily selling and trading, the actual items listed may or not be available.

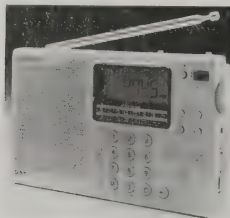
All of our stores are linked via computer which allows real time access to our ever changing inventory. For your needs, you may call any of our locations to check for availability or to discuss an alternative with one of our salespersons.

The Used and Demo Equipment lists are also available on our web site and are updated every week ([www.aesham.com](http://www.aesham.com)). Check it Out!

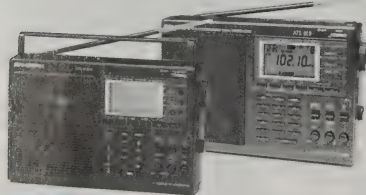




**ATS-404** Full Performance, Full Featured Digital, AM/FM Stereo Shortwave Receiver Continuous coverage (continuously tunes all shortwave bands and any frequency in between). AM reception with 9k/10k switch, FM plus stereo with earphones. Keypad entry and auto and manual search buttons, 45 memory presets, auto memory scan. Illuminated LCD display, tone control, lock-switch. Dual time (12/24 hour) clock and adjustable sleep timer with new Human Wake System. Carrying case and stereo earbuds included. Uses four "AA" batteries. 6.5" w x 4" h x 1.25" d... **\$79.99**



**ATS-505** Professional Digital Multiband Receiver AM/FM stereo/shortwave and SSB reception • Continuous coverage (tunes all shortwave bands and any frequency in between) • Auto memory scan (45 presets, plays each in sequence) • Auto preset system, determines all memory presets based on signal strength of station • Fine tuning • 9/10kHz switch • Lockswitch • Tone control • Local/DX switch • Dual time clock, adjustable sleep timer and Human Wake System with repeating beep tone (volume increases every 15 sec.). Includes carrying case and earphones..... **\$129.99**



**ATS-818CS** (left) World Band Receiver with Programmable Cassette Recorder 16 bands, continuous coverage 50kHz to 30MHz. AM/SSB/CW/FM modes; stereo via headphones, 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary dial. AM wide or narrow filter, tone and RF gain controls, signal strength and battery indicator. Programmable cassette recorder, play and record LED indicator, auto-stop feature. Clock with dual time display, alarm and sleep timer. Uses seven "AA" batteries (not included). Includes AC adapter and external antenna adapter. 11.5" w x 8.5" h x 2.75" d, 5 lbs ..... **Closeout \$219.99**

**ATS-818** (right) World Band Receiver All features above, w/out cassette recorder.. **Closeout \$179.99**



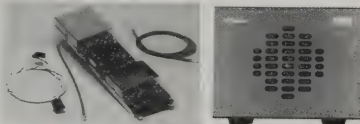
**ATS-606A** Compact Digital All-Band World Receiver (left) Continuous all-band coverage 153 kHz-30MHz. AM/FM (FM stereo with earphones). 54 memories, manual or keypad tuning, 1kHz/step fine tuning, scanning, LCD display. Dual time clock and sleep timer. 5.75" w x 3.5" h x 1.25" d. **\$139.99**

**ATS-909** FM-Stereo/MW/LW/SW PLL Synthesized Receiver (right) Five tuning methods: Direct frequency, Autotune, Manual, Memory recall and Rotary, 307 memories. Stereo via earphones, SSB reception. MW 9k/10k switch. AM wide/narrow filter and FM mono/stereo selector. Dual time with three timers and sleep timer. Clock feature displays 42 city times. RF gain/tone controls. Lock switch, recorder output jacks, battery and signal strength indicator. Uses 4 AA batteries or 6V DC; AC adapter incl. 8.5" w x 5.375" h x 1.375" d, 1.9 lbs... **\$249.99**

**DT-200V** Broadcast and TV Band Receiver (left) Fits in shirt pocket or clips to belt. Covers AM and FM broadcast bands (FM stereo via headphone), plus the audio portion of TV channels 2 to 13. LCD display, up and down tuning buttons, auto-scan, 19 memories, automatic shut-off, built-in speaker. Belt clip and stereo earphones included. Uses two "AA" batteries. 4.375" h x 2.625" w x .75" d, 5 oz..... **\$69.99**



**R-8B** Communications Receiver Covers 10kHz-30MHz (35-55MHz, 108-174MHz w/optional VHF converter) • Dual VFOs • 1000 memories • Multi-function scan • AM/FM/RTTY/CW/LSB/USB modes • 5 voice bandwidth filters • Built-in receive preamp/attenuator and noise blanker • S-meter • Pass-band offset • Selectable AGC • Built-in speaker • Multiple antenna inputs • Sequential tuning • 3 selectable tuning step sizes • Keypad entry of mode & bandwidth • Selectable sideband • Synchronous AM detector • RS-232 computer control • Speaker/recorder connections • Multi-voltage power supply • 13.5" w x 5.25" h x 13" d, 13 lbs ..... **\$1499.99**



**1590** VHF Converter (left) 35-55MHz and 108-174MHz ..... **\$269.99**

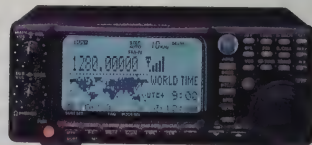
**MS-8** External Speaker (right) for R-8B.... **\$59.99**



**VR-500** High Performance Mini Receiver General coverage 100kHz-1300MHz (cell blocked) • CW, SSB, LSB and USB, AM and FM wide/narrow modes • Includes AM/FM broadcast, HF shortwave up to 16MHz, VHF/UHF TV bands, VHF AM aircraft band, and a wide range of commercial/public safety frequencies • Keypad entry • 1000 memory channels • 100 "skip" memories • 10 search memories • 100 dual watch memories • Priority • Powered by 2 "AA" alkalines or 9-16V DC • 2.2" w x 4.2" h x 1" d, 7 oz..... **\$299.99**



**FRG-100B** High Performance Communications Receiver Covers 50kHz-30MHz - CW, SSB, AM modes; FM optional. 50 tunable memory channels and two band edge memories. Multi-function scanning. Adjustable SSB carrier offset, selectable AGC rate, noise blanker, all mode squelch, RF attenuator, twin 12 and 24 hour programmable clocks with on/off timer and sleep-timer, CAT system for PC control. Bright backlit LCD readout with adjustable control. 120/240 VAC or 12-14VDC @ 1.2A 9.375" w x 3.5" h x 9.5" d, 6.6 lbs (See Price Guide for optional filters and high-stability oscillator)..... **\$549.95**



**VR-5000** Multimode Scanning Receiver Continuous frequency coverage from 100kHz to 2.6GHz (cellular blocked) • Direct keypad frequency entry and a wide variety of scanning capability • 2000 memory channels, 100 memory banks with alphanumeric labels • Dual receive • Bandscope graphical activity monitor • "Smart Search" automatic memory loading feature • World clock with time zone map • 13.5VDC @ 0.7A • 7.1" w x 2.75" h x 8.0" d, 4.2 lbs..... **\$619.99**



**VR-120D** Mini Communications Receiver Provides general coverage receive from 100kHz-1299.995MHz (cell blocked) on AM/FM wide and narrow modes; includes AM and FM broadcast, HF shortwave, VHF/UHF TV, VHF AM aircraft band, and a wide range of commercial and public safety frequencies. • Rugged outdoor-ready case • Ultra-long battery life • BNC antenna connector • 4-button operation • Easy access, wide-band coverage • Special "preset mode" aids in quick tuning • Super simple one-touch memories • Versatile 640 channel memory system • Option for AC or DC power with optional adapter/cable • Wide selection of scanning modes • 3.3" h x 2.3" w x 1" d, 6.9 oz..... **\$189.99**



# SONY®

## WORLD BAND RADIOS

**ICF-SW07** PLL synthesized • FM 76-108 MHz, SW 1621kHz-29.999 MHz, MW 530-1620kHz, LW 150-529 kHz • FM stereo at headphone jack • SSB/CW, AM synchronous detection • SW station call, my-memory tuning plus 4 other tuning methods: direct manual, scan or preset • 3000 frequency memories • One-push access to 8 major stations (BBC/VOA/DW, etc.) • Editable station labels • 24-city name/time display • Built-in timer • Clock with sleep timer and alarm • Requires 3 VDC or 2 "AA" batteries • Includes external active antenna module, AC adapter, stereo earphones, leather case • 5.3" w x 1.2" d x 3.6" d, 9.1 oz. .... **\$399.99**

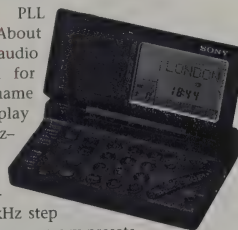


**ICF-SW40** PLL synthesized • Analog/digital tuning • 14 bands • Range: LW/AM/SW (3850kHz-26.1MHz) and 76-108MHz FM (FM stereo-to-headphone jack) • 20 station memory presets • 1kHz step tuning • Built-in clock with dual standby function • 6.75" w x 4.25" h x 1.6" d, 15 oz. .... **\$119.99**



**ICF-SW77** PLL synthesized • Electronic rotary tuning • Preset, 10-key direct, manual and scan tuning • 150kHz-30MHz and 76-108MHz (FM stereo-to-headphone jack) • 50Hz tuning steps • Clock display • 5-event programmable timer • Sleep timer • 162 memory presets with station name tuning • SSB/CW and AM synchronous detection • Backlit LCD display • World time scale • Large, 5" x 3" speaker • Requires four "C" cells • Includes 120V adapter, earphones, belt and wind-up antenna • 10.8" w x 6.8" h x 1.8" d, 3.3 lbs. .... **\$469.99**

**ICF-SW100S** PLL synthesized • About the size of an audio cassette - ideal for travel • 24 city name and time display • Range: 150kHz-30MHz and 76-108MHz FM (stereo-to-headphone jack) • 1kHz step tuning • 50 station memory presets • Editable station labels • Auto scan, manual and 10-key direct access tuning • Built-in clock with sleep timer and dual standby • Includes stereo headphones, 120 VAC adapter, active antenna and soft carrying case • Requires 3V DC or two "AA" cells • 4.3" w x 0.9" h x 2.8" d, 8 oz. .... **\$349.99**



**ICF-SW12** 11 bands, including FM, AM and SW bands 1-9 • Designed for travel - compact size with protective lid • World time clock and universal time coordinator to calculate time in cities worldwide • Backlit LCD display • LED tuning Indicator for precise center-frequency indication and accurate tuning • Built-in alarm with convenient snooze button • Requires 2 "AA" cells • 4.3" w x 3.1" h x 1.2" d ..... **\$89.99**



**ICF-SW35** PLL synthesized, dual Conversion super heterodyne • Range: AM (530-1710 kHz), FM (76-108MHz) • FM stereo at headphone jack • Shortwave from 2250kHz-26.1MHz • UP/DOWN tuning buttons 1kHz/5kHz tuning steps in shortwave • 50 memory presets (5 banks of 10 presets each) • 1 or 5 kHz step tuning on SW • Memory scan • Built-in digital clock with two wake times and 60-minute sleep timer • Dial illumination button, lock switch, attenuator • 2.5" speaker plus earphone jack • Includes cloth protector and SW guide • Requires 3V DC or two "AA" cells • 6.7" w x 4.5" h x 1.4" d, 16 oz ..... **\$89.99**



**ICF-SW1000T** PLL synthesized • 1 kHz step tuning • 130kHz-30MHz and 76-108MHz FM (stereo to headphone jack) • Built-in stereo cassette recorder with auto-reverse and timer record • SSB and synchronous AM detection • 32 memory presets • Built-in clock with alarm, dual standby and sleep timer • Requires 3VDC or 3 "AA" cells • Includes vinyl case, stereo earphones, hand strap and wind-up antenna • 7" w x 4.25" h x 1.6" d, 1 lb. .... **\$399.99**



### ICF-SW7600GR

PLL synthesized • Manual and auto scan 1kHz step tuning • 10-key direct access tuning • 150kHz-30 MHz & 76-108 MHz FM • Dual conversion super-het • SSB/CW and AM synchronous detection • Multi-function LCD digital readout • Dial light and LED tune indicator • Built-in clock with sleep timer and dual standby functions • Record output jack • 9/10kHz MW tuning switch • External antenna jack • Large 3" speaker • Requires 6V DC or 4 "AA" cells • Hold button preventing accidental changes to presets • 100 station memory presets • World time/dual clocks • Includes vinyl case, wind-up antenna and handbook • 7.6" w x 4.75" h x 1.3" d, 1 lb., 5.5 oz. .... **\$179.99**



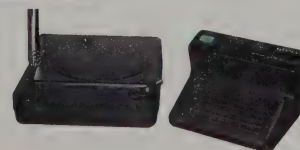
**AN-LP1** Active Antenna Enhances sensitivity for clearer reception of even weak signals. • Light weight • Provides high sensitivity and noise reduction • Active antenna controller with rotary tuning • 19" loop that folds to 7" for portability • Easy to mount • Includes soft carrying case ..... **\$89.99**



**AN-1** Outdoor/Indoor Active Antenna Improves LW/MW/SW reception from 150kHz to 30MHz. A low noise and interference reducing FET amplifier module, with a 59 inch telescopic whip, mounts outdoors or inside a window or attic. Includes a 39-foot coaxial cable which connects to a control box at the receiving position. An output lead with two alligator clips, or mini-plug, connects to the radio's antenna input. Uses 6 AA cells or 9V AC adapter (neither are supplied) ..... **\$99.99**



**AN-102** Indoor Active Antenna Three ways to use! For SW, a coupler cord from the antenna controller plugs into to radio's external antenna jack, or a special coupler cord from the controller clips onto radio's external antenna. For LW/MW, radio is positioned next to controller, coupling without a direct connection. Includes antenna module with 45" whip antenna, antenna controller box and two coupler cables. Uses 4 AA cells (not included). **\$79.99**





# ICOM

## PCR-1000-02 BON

PC Communications

Receiver Connect the 1000-02 to a lap/desktop IBM-compatible for reception of a wide range of frequencies. NOW includes the Bonito software! Listen to favorite stations in the background while running other applications. 100% PC hardware external. Includes everything needed to connect to a PC: power supply, speaker, antenna and cable • 0.01-823.999MHz, 849.000001-868.999MHz, and 894.000001-1300MHz (cell blocked, guaranteed specifications 0.5-1300MHz, only) • WFM, FM, AM, SSB, CW • 1000 memories per file • Requires Windows® OS, 10MB free space, 16MB RAM, FD drive, RS-232C (38400+ bps) serial interface, 640 x 480 display..... **\$374.99**



**R-75 HF + 50MHz Receiver** Covers a wide frequency range from 0.03-60MHz and includes 101 memory channels. All mode - USB, LSB, CW, RTTY, AM, S-AM and FM. Alphanumeric readout with digital bar S-meter. Conventional tuning plus numeric key pad for direct input. Features include high stability receiver circuit, superior dynamic range, 2-level preamp, noise blanker, synchronous AM detection, twin PBT capability, front mounted speaker, filter options and optional UT-106 DSP. Operates from 13.8V DC @ 1.1A, or supplied AC adapter. 9.5" w x 3.75" h x 9" d, 6.6 lbs..... **\$599.99**



**R-8500-02 Wide-band All-mode Receiver** 0.1-2000MHz (cell blocked) with 10Hz resolution. All modes: AM, FM, WFM, SSB, CW and optional TV-R7100 TV/FM adapter. Direct keyboard entry. Versatile scan functions; 1000 tunable multi-function memories; 20 banks of 40 channels plus auto-write and skip areas. 20 scan edge memory channels store 10 sets of frequencies for programmed scan, plus priority. Selectable AGC, noise blanker, tone, squelch, record jack. Selectivity: 500Hz, 2.3, 6 and 15kHz. RS-232C interface. Voice synthesized read-out optional. 110/220V AC. 11.875" w x 4.875" h x 10.875" d, 16.5 lbs..... **\$1399.99**

**Secure**  
www.aesham.com

# AOR

## AR-8200 MK III-B All-Mode

Wide-Band Modular Handheld

Receiver Improved! Wider coverage, a new TCXO for greater stability, improved sensitivity and intermod, enhanced S/N and better audio. • 100kHz-3GHz (cell blocked) • FM-w, FM-n, super narrow AM, AM-w, AM-n, USB, LSB, CW modes • 1000 memories (20 banks x 50 channels, 40 search) • Two VFO, twin frequency readout • Alpha-numeric display • Telescopic antenna, detachable MW bar antenna • Band scope with save trace facility • Bar signal meter • Step-adjust, frequency offset, AFC • Optional memory expansion, CTCSS squelch/search, tone eliminator, 20 sec. record/playback and voice inverter • Noise limiter • Attenuator • Computer control and programming capability • Includes NiMH cells (charge while operating) • 2.4" w 5.7" h x 1.0" d, 0.75 lbs..... **\$569.99**



## AR-3000AB All-Mode High Performance

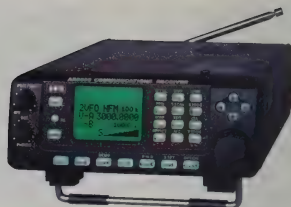
Professional Monitor 100kHz-2036MHz (cell blocked) • 400 memory channels • FM-w, FM-n, AM, USB, LSB, CW • Tri-conversion IF stage • Scans 50 channels per second rate • RS-232C port for computer control • 4 search banks • Manual tuning dial • BNC antenna connector • Scans 20 channels per second • 5.4" w x 3.1" h x 7.9" d, 2.4 oz.. **\$1099.99**



**752C SSB/CW Audio Filter** Pull out stations from noise and interference. Peak, notch, low or high pass control helps eliminate heterodynes and interference. Filters tune 300 to 3000Hz; bandwidth varies from 40Hz to almost flat; notches to 70dB. Switchable inputs for two radios. Uses 9 to 18VDC. 10" w x 2" h x 6" d..... **\$89.99**



**8100W Regenerative 10' wire** makes world-wide stations come in loud and clear. Tune international shortwave, SSB/CW, RTTY and packet. Covers 75-13M SW bands. Vernier drive tuning. Uses 9V battery, earphones or plug-in speakers. 7" w x 2.5" h x 6" d, 1 lb..... wired **\$89.99**



## AR-8600 MK II-B Multimode Mobile/Base

Receiver Use anywhere - mobile, base or portable. Powered from an external 12V DC power supply, optional DC lead from a 12V vehicle or from an optional internal NiCad pack. • All mode receive - including super narrow FM • Programmable tuning steps to 50Hz • RS-232 port (control software available from AOR web site) • Coverage: 530kHz-3GHz (cell blocked) • 1000 memory channels (20 banks) • True carrier reinsertion in SSB modes • Improved front end with RF preselection of mid-VHF bands • Step adjust frequency, AFC • Noise limiter and attenuator • Versatile band scope with save trace facility • Twin frequency readout with bar signal meter • Separate volume and squelch controls • Write protect and keypad lock • Programmable scan and search • RS-232C computer port • Flash-ROM memory (no battery required) • Slot card sockets • BNC socket for 10.7MHz output • 5.9" w x 2.2" h x 6.9" d, 4.9 lbs..... **\$899.99**

## SDU-5500

Spectrum Display

Unit Visually identify signals and relative strength

• Works with AR-5000B/AR-3000AB, ICOM base and other receivers with a 10.7MHz IF output • 10MHz bandwidth - 10kHz to 2600MHz • 5kHz/30Hz resolution • White/blue mono LCD..... **\$1099.99**



**956 LW/MW/SW Pre-selector/Tuner** Improves reception of signals from 150kHz to 30MHz. Boosts signals while rejecting images, intermodulation, other phantom signals. 2" h x 3" w x 4" d..... **\$49.99**

# Look For This

**NEW**

**& Check Out AES' Latest Additions.**



# The Ultimate in Technology

## GRUNDIG

### Satellit 800 AM/FM/Shortwave Radio "The Best Radio on the Planet"

55 years of outstanding performance and service establishes Grundig as a leader in consumer audio. Decades of making the Satellit series radio defines them as the benchmark in shortwave technology. The Satellit's extensive frequency coverage includes Long wave, AM-broadcast and Shortwave, covered continuously from 100-30,000 KHz.; FM-stereo broadcast, 87-108 MHz.; VHF aircraft band, 118-137 MHz.

#### ENGINEERED FOR THE BEST POSSIBLE RECEPTION

- Single sideband (SSB) circuitry for listening to two-way communications, such as ham radio.
- Three built-in bandwidths, using electronically switched IF filters: 6.0, 4.0, 2.3 KHz.
- Synchronous detector for improved quality of AM and shortwave broadcast signals. Minimizes fading distortion and adjacent frequency interference.
- Selectable fast and slow AGC mode.
- High dynamic range, allowing for detection of weak signals in the presence of nearby strong signals.
- Excellent sensitivity and selectivity.
- Digital frequency display to 100 Hertz accuracy on AM, SW and VHF aircraft bands. 50 Hz when SSB used.
- A real tuning knob, like on traditional radios, but with ultra-precise digital tuning and with absolutely no audio muting when used.

- A modern, direct-frequency-entry keypad for instant frequency access and push buttons for fixed-step tuning.
- 70 programmable memories, completely immune to loss due to power interruptions. Memory scan feature.

#### LEGENDARY GRUNDIG AUDIO

- Outstanding audio with separate bass and treble tone control.
- FM stereo with headphones or external amplified stereo speakers.
- Includes high quality stereo headphones.
- Multiple audio outputs: line level output for recording, stereo headphone output.

#### FULL ANTENNA CAPABILITIES

- Built in telescopic antenna for SW, FM and VHF aircraft band.
- External antenna connections for the addition of auxiliary antennas, e.g. professionally engineered shortwave antennas; long-wire shortwave antennas; specialized AM broadcast band antennas for enthusiasts of AM DX'ing; FM broadcast band antennas; VHF air band antennas.

#### MORE HIGHLY DESIRABLE FEATURES

- Large, informational LCD display of operational parameters, measuring a massive 6 1/2" x 3 1/2". Easy to read and illuminated.
  - Dual, 24 hour format clocks and dual programmable timers.
  - An elegant, calibrated, analog signal strength meter.
  - Auto backlight shutoff to conserve battery life.
  - Low battery indicator.
  - Operates on six internal "D" cell batteries or the included 110V AC adapter (220V AC adapter is available).
- Dimensions: 21" L x 8 1/2" H x 9 1/2" W  
Weight: 14.5 lb.



### Yacht Boy 400PE



#### Yacht Boy 400PE AM/FM/SW Radio

- Digital Dual-Superhet tuner • 1.711-30 MHz SW range • SSB with fine tuning control • 40 random presets • Direct frequency entry • Manual and auto tuning • Built-in antennas • Supplementary SW antenna • SW antenna jack • FM stereo with headphones • LCD shows frequency, time and more
- Dual 24 hour clocks • Alarm • Sleep timer • Battery operated or included AC adapter.

Dimensions: 7 3/4" W x 4 5/8" H x 1 3/8" D

Yacht Boy 400PE AM/FM/SW Radio

### S350



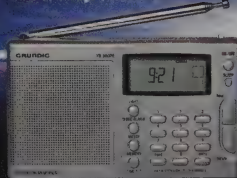
#### Grundig's ALL NEW S350 AM/FM/SW Field Radio

- Sensitive analog tuner with digital frequency readout • 2.3-27.41 MHz SW range • Fine tuning control • RF gain control • Low-pass filter • Built-in antennas • External antenna jacks • Stereo line level out
- Separate bass, treble control • Digital clock with alarm • Sleep timer • Headphone jack • Uses 4 D cell batteries or included AC adapter.

Dimensions: 10 1/2" W x 6 1/2" H x 3 1/2" D

S350 AM/FM/SW Radio

### Yacht Boy 300PE



#### Yacht Boy 300PE AM/FM/SW Radio

- LCD displays time, frequency and memory station • Display light for momentary illumination • Digital PLL synthesized receiver • Direct frequency entry system for instant access to station • 24 station memory presets
- Sleep timer and alarm • FM/SW 360 degree rotary telescopic antenna / MW ferrite for antenna
- External antenna jack for improved shortwave reception • Includes: AC adapter, carrying strap, case, earphones and three AA batteries.

Dimensions: 5 3/4" W x 3 1/2" H x 1 1/8" D

Yacht Boy 300PE AM/FM/SW Radio

### FR200 Emergency Radio



#### FR200 AM/FM/SW Radio

- Four Band Tuning — AM/FM/SW1/SW2
- Built in power generator
- 90 seconds of cranking generates over an hour of power
- 2 1/2" diameter speaker
- Emergency light
- Fine tuning knob
- DC jack, earphone jack

Dimensions: 6 3/4" W x 5 3/4" H x 2 1/8" D

FR200 AM/FM/SW Radio



# GRUNDIG



**G-2000A** Porsche Design Shortwave Radio Designed for Grundig by F.A. Porsche. This radio has a titanium finish look with a genuine leather case that closes around the radio like a book and serves as a stand. • Ranges: (FM) 87.5-108MHz; (MW) 530-1710kHz; (SW) 2.3-7.4 and 9.4-26.1 MHz • Modes: AM, FM-stereo (with earphones) • Illuminated multifunction LCD display • Digital keypad and Up/Down manual tuning • 20 user-set station memories • Clock with 12 or 24 hour selectable format, alarm (radio or buzzer) and sleep timer (10-90 minutes) • Built-in telescopic antenna for FM/SW and ferrite bar for AM • Includes a leather case, earphones, requires 3 AA batteries • 5.5" x 3.5" h x 1.25" d, 7.2 oz. .... **\$79.99**

## E-TRAV VII

E-Traveler Digital Radio Only 4.5" x 2.563" x 0.875" and weighing 5.3 oz. Sleek, design that fits into a pocket, briefcase or purse. Titanium color with black accents, combined with rich, rubberized side panels. Superior dual conversion super-heterodyne circuitry for optimal sensitivity and selectivity. • (FM) 87.5-108MHz; (MW) 530-1710 kHz; (SW) 2-30MHz continuous coverage • Modes: AM, FM-stereo (with earphones) • Up/Down digital controls with auto-scan and manual tuning • 30 memories with scan • 12/24-hour selectable format clock, alarm and sleep timer • Built-in telescopic antenna for FM/SW and ferrite bar for AM • Includes a carrying pouch, 2 AA batteries, Shortwave Listening Guide..... **\$79.99**



## MINI WORLD 100

Portable Pocket AM/FM/SW Radio Analog tuning, receives AM (530-1710 kHz), FM stereo and six shortwave bands: 5.8-6.4, 6.9-7.5, 9.4-10, 11.65-12.15, 15-15.65 and 17.5-18.4 MHz. LED tuning indicator. Includes a case, belt clip and earbud phones. Operates from 2 AA batteries (supplied). 2.75" w x 4" h x 0.75" d, oz..... **\$29.99**



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www.aesham.com

# uniden



## CB RADIOS

**PC-78XL** AM Mobile CB Radio Full PLL-synthesized 40 channels • DSC, Dynamic Squelch Control • Instant channel 9 • Microphone and RF gain controls • Delta tune control • Fine tunes received signal and reduces interference • Noise blanker and automatic noise limiter • PA/CB switch • Dimmer control • TX/TX LED indicators • Antenna warning LED - lights when high SWR condition is present • 7.25" w x 8.625" d x 2.375" h, 4 lbs. 3 oz.... **\$99.99**

**PC-78LTW** Same basic features as the PC78XL with the addition of NOAA weather channel reception with weather alert..... **\$119.99**



**PC-68LTW** Bearcat Pro Series 40-Channel CB Radio with Weather Alert Features a rugged front microphone, backlit control knobs, 7 NOAA weather channels with WX alert, S/RF meter, a channel indicator and dynamic squelch control. Additional features include a channel selector, TX/RX indicator, instant channel 9, RF and mic gain controls and PA mode. 6.25" w x 2.125" h x 9" d, 3 lbs..... **\$99.99**

**PC-68XL** Bearcat Pro Series 40 Channel CB Radio Same as PC68LTW above, but without Weather feature..... **\$79.99**



**PRO-520XL** Compact 40 Channel AM Mobile CB Radio 4W • Instant channel 9 access • 4-segment S/RF meter • TX LED • LED channel indicator • RF gain • PA switch • Automatic noise limiter • 4.5" w x 6.75" d x 1.375" d, 1 lbs. 10 oz. .... **\$54.99**



**PRO-510XL** Compact 40 Channel CB Radio Incorporates state-of-the-art microelectronics into a sophisticated Euro-styled 2-way radio. Front mounted microphone, ANL Switch, S/RF LED meter. 4.5" w x 1.375" h x 7.5" d, 3 lbs..... **\$39.99**

# Cobra



## CB RADIOS

**148NW ST** Full Featured AM/SSB Mobile CB Radio 12W PEP SSB RF output • 4W AM RF power (FCC max. allowed) • 120 channels • Dual conversion AM receiver • SoundTracker™ system • Night-Watch™ dimmer control • USB/LSB/AM • Digital channel indicator • RX/TX indicators • Switchable noise limiter & blanker • RF-gain control • Hi/low tone switch • PA capable • SWR indicator • Instant channel 9 • 7.25" x 2.25" x 8.625", 6 lbs. **\$179.99**



**19DX III** AM Mobile CB Radio Compact design • 40 channels • Combination S/RF meter • 4W RF output (max. allowed) • Instant channel 9 switch instantly switches from any channel to Emergency Channel 9 • TX indicator • CB/PA switch selects CB operation or PA operation • Mobile bracket • 4.563" w x 1.75" h x 7.25" d, 21 lbs ..... **\$49.99**



**29WXNW ST** Full-featured Weather Band CB Radio with Illuminated Front Panel 40 channels, AM • Instant channels 9 and 19 • 7 NOAA weather channels with weather alert tone • 4W RF power output • SoundTracker™ system • Tactile controls • Dimmer control • Switchable automatic noise limiter and noise blanker • SWR calibration • PA capability • NightWatch™ illuminated front panel • 7.2w" x 2.2h" x 8.6d", 6 lbs ..... **\$129.99**



**HH-ROAD TRIP** SoundTracker™ 40 Channel CB Handheld with Antenna Keep in vehicle for 24-hour emergency access, to communicate between vehicles, and to receive the latest weather information from 10 NOAA channels. SoundTracker™ system cuts noise up to 90% and 4W of power gives up to 4 miles range. High/low power switch reduces power consumption, extending battery life. Operates on 9 AA alkaline or NiCads or off vehicle battery with the included DC cord with cigarette lighter plug. Included magnet-mount antenna provides maximum range and flexibility. 6.75" h x 2" w x 1.75" d ..... **\$79.99**



# Cobra

## FRS RADIO

**PR-3000-2DX** MicroTalk® GMRS/FRS Two-way Radio X2 POWER TECH provides increased power for up to 6 miles and stronger penetration of buildings, cars, dense woods and other obstacles. 22 channels (7 FRS/GMRS, 7 FRS, 8 GMRS) • 38 privacy codes • Scan (channel/privacy code) • Vibra Alert® Silent paging • Call alert (10 selectable tones) • Selectable roger beep • Hands-free operation (VOX) • Selectable high/low

power (GMRS) • Backlit LCD • Battery/power saver • Key lock • Belt clip and wrist strap • Requires 4 AAA batteries (per radio, not included). 2.25" w x 6.5" h x 1" d ..... pair **\$79.99**

# KENWOOD

## FRS RADIO

**UBZ-LH1BK** FreeTalk™ 500mW • 14 channels • 38 talk groups (CTCSS) • Privacy talk voice • 4 call ring tones CORDS (In-Range Detect System) • Battery saver and auto off • Low battery alert indicator/beep • Works up to 40 hrs operation with 3 "AA" alkaline cells • Only available in black • 3.5" w x 2.25" w x 1" d ..... **Closeout \$69.99**

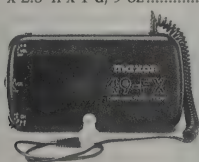


# maxon

## 49MHz FM PERSONAL COMMUNICATORS

Low power, 1/4 mile average range • Dual conversion super-heterodyne receiver provides crisp, clear transmission • Use for group communications • Push-to-talk or voice activated - talk-to-transmit • No license required • Channels: 49.830MHz, 49.845MHz, 49.890MHz, 49.860MHz, 49.875 MHz

**MX-49SX** A single channel unit including a lightweight adjustable headset with retractable whip antenna and boom microphone with windscreen. Uses only one of first 3 channels (see above) • LED power indicator • battery charger jack • Range up to 1/4-mile • Uses two "AA" alkalines or rechargeable nicads • 5" w x 2.5" h x 1" d, 9 oz ..... **\$29.99**



**MX-49FX** The unique earphone and mic pick up voice vibrations from the ear canal for transmit audio and also provide received audio • Will not interfere with helmets • 5 selectable channels • Built-in antenna gives up to 1/8-mile range • Remote PTT button and channel selector. Uses 3 "AA" batteries. 5.5" w x 3" h x 1" d 6 oz ..... **\$49.99**

# ICOM

## FRS/GMRS RADIOS

**IC-F21GM** FRS/GMRS Radio (left) Perfect for sportsmen, families, clubs, hobbies, or when you need more power than an FRS radio offers. Choose from 15 higher power GMRS channels, 7 channels shared with FRS. Communicate with any FRS radio on these channels. All channels are pre-programmed internally allowing out-of-box operation, only a simple license required. Apply on the FCC web site, complete instructions included. 462.550-467.725MHz (UHF) coverage • 4/2/1W • CTCSS/DTCS signaling for more privacy • Scanning and "Tone Find" seek active channels • Meets various MIL-STD requirements • Drop-in charger included • 2.1" w x 5" h x 1.5" d, 10.6 oz. .... **\$149.99**



**IC-4088A** FRS FM Transceiver (right) Professional quality. Features 14 FRS channels, 38 group codes and enhanced conversation privacy with its built-in voice scrambler. Communication range is approximately 2 miles in wide open space and you get approximately 28 hours of operation from 3 AA alkaline batteries (not supplied). Splash resistant construction for outdoor use. Convenient rechargeable NiCad battery and rapid charger available, as well as optional headsets and microphones. 2.375" w x 4.563" h x 1.563" d ..... **\$89.99**

## RECOMMENDED ANTENNAS FOR CB

### COBRA

**HGA-1000** Magnet mount base loaded mobile antenna with coax and connector ..... **\$19.99**

### HUSTLER

**HQT** A 55" top loaded whip with Mirror Mount bracket. Comes with 12' cable with PL-259 connector. Chrome with a white coil ..... **\$27.99**

**HQ-27M** A 55" top loaded whip with Trunk-lip Mount. Comes with 15' cable and PL-259 connector. Chrome with a white coil ..... **\$36.99**

### LARSEN

**NMO-27C** Base loaded mobile, less mt. **\$33.99**

**NMO-TLP** Low-profile trunk mount for NMO-27C. 17' coax and PL-259 ..... **\$29.99**

**NMO-MM** NMO-27C magnet mount. Comes with 12' coax and PL-259 connector. .... **\$32.99**

### SOLARCON

**A-99** Base Station Antenna. Three-piece fiberglass design uses a half wave over a quarter wave section, and is tunable. Entire 17 ft. 8 in. length radiates producing about 3 dB gain ..... **\$64.99**

**GPX-1** A-99 ground plane kit. Adds 30% more power gain and lower angle of radiation **\$39.99**

### WILSON

**W-1000** 5' base loaded mobile antenna. Available in three mount configurations. All come with 18' cable and PL-259 connector.

**ROOF** thru-hole mount ..... **\$57.99**

**TRUNK** mount ..... **\$65.99**

**MAGNET** mount ..... **\$76.99**

## SCANNERS

**R-3-26** Communications Receiver Provides wide-band capability from 0.5-2450MHz (cell blocked). Features 2" TFT color display which may be changed to mono. Receive favorite TV shows, scan for wireless cameras like those in race cars. Use with a wireless camera to monitor activities. Display to a large monitor or recording device with A/V output terminal. Signal strength and band scope functions assist in finding the action. Includes 450 memories with alphanumeric, CTCSS, attenuator, and more. Long lasting Li-ion battery offers easy charging, lightweight performance, and up to 27-hour continual use on the mono LCD • PC program. capability • 2.4" w x 4.72" h x 1.28" d, 10.6 oz. .... **\$339.99**



**R-5-06** Super Wideband Hand-held Receiver Covers 495kHz to 1309.995MHz (cell blocked), AM, FM, WFM modes. Preprogrammed TV and shortwave memories. Listen to AM/FM broadcast radio stations, police, fire, military, aircraft, various amateur bands, and more. Crisp, clear audio. Large, backlit LCD shows frequency, operating and battery status, signal strength and alphanumeric naming for 1250 memories (including 200 auto-write scan memories and 25 scan edge pairs). • DMS • CTCSS/DTCS decoder • Internal bar antenna • Weather alert • PC programmable and cloning • Weather resistant • Rechargeable NiCad and external DC jack. 2.25" w x 3.4" h x 1" d, 6 oz. .... **\$199.99**



**R-10-05** General Coverage Pocket Scanning Receiver 500kHz-1300MHz (cell blocked). AM, SSB, FM wide or FM narrow modes. Programmable tuning steps. On-screen spectrum display, 1000 non-volatile memory channels in 18 banks of 50 channels. Scan by bank, mode, or program. Alphanumeric characters can be entered to identify channels and banks. Noise blanker and auto noise limiter. Auto frequency control (AFC) • Edge-lit display • 24-hr clock with timer • PC program. capability • Adjustable LCD contrast • Signal indicator • Power-saver • NiCads and wall charger (also will use alkaline or DC) • 2.3" w x 5.1" h x 1.2" d, 10.9 oz ..... **\$299.99**



## Look For This

**NEW**

**& Check Out AES' Latest Additions.**



# Uniden

## HANDHELD SCANNERS

**BC-60XLT-1** Handheld Scanner (left) 30 programmable channels, 10 bands – cover 29-512MHz • LCD channel display • Programmable chain search • One-touch weather • Lockout • Memory backup • Keypad lock • Scan delay • Manual channel access • Track tuning • Keypad lock • Uses four AA alkaline or nicad rechargeable batteries, or operates on AC with included 110V AC adapter • 2.625" w x 6.75" h x 1.5" d, 10.5 oz ..... **\$89.99**

**BC-80XLT** Handheld Scanner Looks similar to 60XLT • 50 programmable channels, 11 bands, 5 banks - cover 29-956MHz (cell blocked) • 5 priority channels • On-touch weather • Manual channel access • Bands search • Full frequency LCD display • Uses four AA alkaline or nicad rechargeable batteries, or operates on AC with included AC adapter • 2.625" w x 6.75" h x 1.5" d, 10.5 oz ..... **\$119.99**

**BC-245XLT** TrunkTracker II Handheld Scanner (middle right) 300 programmable channels, 12 bands including Aircraft and 800MHz (covers: 29-956 MHz - cellular blocked) • Trunk tracking technology: scan and search, lock out, delay, and 10 trunk scan list • Programmable search • Memory backup • Manual channel access • Pre-programmed service search • Channel lockout • 10 priority channels • Rechargeable NiCad battery and wall charger • 2.5" w x 6" h x 1.75" d, 12.5 oz ..... **\$219.99**

**SC-180B Sportcat** (middle left) Hear car and pit crews at auto races, the cockpit at air shows, or use it as a traditional scanner to keep up with emergency personnel. 100 programmable channels, 12 bands/800 MHz (cell blocked)/Air, 10 banks • 10 priority channels • Twin TurboScan™ and search • Manual channel access • Instant weather • Full frequency, alpha-numeric LCD • Rechargeable NiCad and wall charger • Includes sports frequency guide, AC adapter, rubber antenna, belt clip and earphone • 2.5" w x 1.625" d x 6" h, 11 oz. **\$169.99**

**SC-200 Sportcat** Same as above with 200 channels, cloning capability and CTCSS ..... **\$199.99**

**BC-250D** Digital-Capable™ Handheld Scanner (right) Continuous coverage from 25MHz to 1.3GHz (cell blocked) • AM/FM/NFM/WFM modes • TrunkTracker III - EDACS, Motorola, E.F. Johnson • 30 trunking channel indicator annunciators • 1000 channels, 10 banks • 12 service searches • CTCSS/DCS • S.A.M.E. weather alert • Alpha tagging (bank channel and search range) • PC programming and control • Holographic, backlit display • Backlit keypad • 2.5" w x 6.9" h x 1.75" d, 14 oz ..... **\$369.99**

\*Requires installation of BCI2SD card (\$299.99) in order to monitor APCO P-25 digital systems.

## BEARCAT SCANNERS

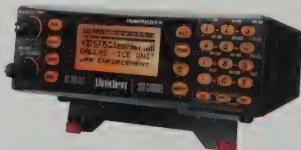
**BC-244CLT** 30 programmable channels, 10 bands • Full freq. LCD • Channel lockout • Mem. back-up • Manual channel access • Alarm clock • One-touch weather • 8" w x 5.5" d x 3" h, 1 lb. 6 oz ..... **\$99.99**

**BC-248CLT** AM/FM alarm clock radio with 20 presets • 50 programmable channels, 10 bands • One-touch weather • Full frequency display • Auto squelch • Lockout • Memory back-up • Manual access • Delay • 5 priority channels • 10" w x 5.5" d x 3" h, 1 lb. 6 oz ..... **\$109.99**

**BC-278CLT** AM/FM Alarm Clock Radio with 20 presets • 100 channels, 12 bands • 800MHz coverage (cellular blocked) • One-touch weather with S.A.M.E. weather alert • Full frequency display • Auto squelch • Lockout • Memory back-up • Manual channel access • Programmable delay • Data skip key • Programmable search • Programmable service search • 5 priority channels • 10" w x 5.5" d x 3" h, 1 lb. 7 oz ..... **\$169.99**



**BC-350A** 50 channel, 11 band mobile/base scanner with Aircraft and instant weather • Super TurboScan™ @ 100 channels/sec. • Full frequency LCD display • Private channels, 20 programmable and scannable • Police channels, 10 programmable fire and emergency channels • Marine channels • Band search • Lockout channels • Mounting bracket, AC adapter, telescoping antenna cigarette and DC power cord • 5.25" x 6.8" x 1.625", 1.6 lb **\$109.99**



**BC-780XLT** Continuous Band Programmable Scanning Radio AM/FM/WFM • 500 channels (10 priority), 10 banks • Covers 25-511MHz, 806MHz-1.3GHz (cell blocked) • Preprogrammed service searches • Full frequency, backlit LCD • TrunkTrackerIII • S.A.M.E. weather alert • SmartScanner™ • Clone feature • Alpha tagging • CTCSS/DCS • PC control • Base or mobile • Beep alert • Record every channel or every ID programmed (up to 1000 IDs) • 7" w x 6.56" d x 2.375" h, 41.96 oz ..... **\$299.99**

**BC-785D** Digital-Capable™ Base/Mobile Scanner (looks similar to above) Continuous band coverage from 25MHz-1.3GHz (cell blocked) • TrunkTracker III - EDACS, Motorola, E.F. Johnson • S.A.M.E. • Full frequency LCD • 1000 channels, 10 banks • AM/FM/WFM modes • 12 service searches • Alpha tagging • Alphanumeric • CTCSS/DCS • Control-channel-only mode • Clone feature • PC programming & control • Record functions • Backlit controls • 7" w x 6.5" h x 2.375" d, 14.9 oz ..... **\$369.99**

\*Requires installation of BCI2SD card (\$299.99) in order to monitor APCO P-25 digital systems.



**BC-895XLT** "Trunk-Tracker" • 300 channels, 12 bands including Aircraft and 800 MHz, 10 banks • VFO control – covers 29-511, 806-956MHz (cell blocked) • 10 priority channels • TurboScan™ • One-touch weather with weather alert • Manual channel access • Built-in CTCSS • Trunk search • Scan lock-out/delay • RS-232C port • Signal strength meter • Auxiliary tape output • Automatic store • 30 trunking channel indicator annunciators • 3-day memory backup • Programmable search • Lockout • 10.875" w x 3.625" h x 7.5" d, 3.5 lbs ..... **\$199.99**



**BCT-7** Bear Tracker 800 Pre-programmed with frequencies for highway patrol, D.O.T, local and county police, news, fire, aircraft and CB services. Selectable by state (except HI) • 12 bands • 100 channels • Highway patrol priority alert • Data skip • Weather scan • 13.8V DC or 110V AC • Mobile mount • 5" w x 7" d x 1.375" h, 1 lb 11oz. **\$169.99**

## GARMIN

The colorful Gekos are the smallest and lightest waterproof GPS units available. Both the Geko 101 and 201 are inexpensive and offer a sleek, thin design with simple operation.



**GEKO-101** Sun-yellow case, economical. Perfect for navigational novices. Features such as one-touch waypoint marking make it a snap to use. Easily maneuver from one waypoint to the next using its 250-waypoint storage capacity with symbols, and trace along a route with PanTrack™. Easy operation: five buttons for one-hand use • High-contrast display – 64 x 100 pixels with LED backlighting • 12-hour battery life on 2 AAAs • 250/0 waypoint/route storage • Automatic 3,000 trackpoint storage with PanTrack™ and TracBack™ • Submersible for 30 min. at one meter • 1.9" w x 3.9" h x .96" d, 3.1 oz ..... **\$99.99**

**GEKO-201** Distinctive canopreen case, the powerful 201 allows more waypoint and route storage, as well as available PC and external power connectivity. It also offers built-in WAAS capability. Has a user-configurable trip computer and 10,000 trackpoints, as well as PanTrack™ and TracBack™. • 10 feet accuracy or less with WAAS • Five buttons for easy one-hand operation • 64 x 100 pixel, high contrast display • 12-hour battery life on 2 AAAs • 500/20 x 125 waypoint/route storage • Automatic 10 track storage • PC connectivity and external power ports • Submersible for 30 min. at one meter • Includes four interactive, outdoor games • 3.9" h x 1.9" w x .96" d, 3.1 oz ..... **\$139.99**



## Service Questions?

414-358-4087  
Milwaukee, WI





### GPS-12XL Personal Navigator™

for Extreme Outdoor Enthusiasts  
12-channel receiver with external antenna for fast, accurate position fixes in tough conditions like tree canopy and urban obstructions. Rugged, compact case ideal for boaters, hunters or hikers. 500 user waypoints with alphanumeric name and user comments. 20 reversible routes of up to 30 waypoints each. TracBack™ navigation turns a track log into a route back home. Nine waypoint alarms. Over 1000 track log points, position averaging, emergency erase, and cloning features. Up to 12 hours operation on 4 "AA's"..... **\$219.99**



### NAVITALK™ Navigator™/Cellular Mobile

Combines GPS with cellular technology into one handheld unit. During travel, location is displayed in real time on a built-in map. Send exact position to another NavTalk for display. Cell phone: Customized phone book • One-touch speed dial • Built-in pager • One-touch emergency dial (subscription required) GPS: Interstates with exit info, cities, airports, etc. Plug into a PC and download from optional MapSource™ CDs..... **Closeout \$199.99**



### RINO-120 GPS-Enabled Handheld for FRS and high-performance GMRS

• Two-way communications up to 2 miles using FRS (up to 5 miles, using GMRS) • 0.5/1W (FRS/GMRS) • 14 channels, 38 squelch codes, and VOX • Voice scrambler • Vibration mode for "silent" calls • 12-channel, GPS receiver provides position accuracy of less than 10' when enabled • Peer-to-Peer positioning to transmit GPS location, showing distance and bearing • Navigation features include extensive waypoint storage, TracBack, multiple position formats and built-in trip computer • Basemap of the Americas (major cities, highways, thoroughfares, rivers, lakes, coastlines, borders, and railways) • 8MB internal memory accommodates downloadable cartography from GARMIN's MapSource CD-ROMs • Uses 3 "AA's" • 8.5 oz..... **\$249.99**

### GPS-72 Low-cost solution for land/marine navigation

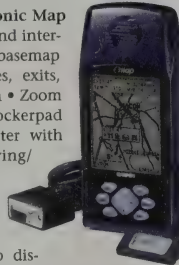
providing precise positioning using WAAS data. • Built-in quad helix antenna • High-contrast, gray-scale display ("large number" option) • Backlit display/keyboard • Permanent data storage • Water resistant • 500 name and graphic waypoints, 50 reversible routes • Lat/Lon, UTM, Loran TDs, Maidenhead, MGRS, and user grid formats • Arrival, off-course, clock and proximity alarms • 1 MB memory for MapSource™ data • Trip computer with odometer, stopped time, moving/overall average, total time, max. speed..... **\$159.99**



**IQUE-3600 PDA With Integrated GPS** The power of Palm OS integrated Que 5, Garmin GPS and mapping software. Look up appointments or contacts and get routing to their location with voice-guidance! New ARM processor enhances battery life, screen re-draw, graphics, and audio • SD expansion slot for storage • Flip-up, integrated GPS patch antenna for optimal reception • MP-3 player • Memo playback • Voice recorder • Rechargeable internal li-ion battery • 32 MB memory • Soft cover, metal stylus • Choice of Americas or Atlantic MapSource™ • High res, color, 2.16" w x 3.24" h display • 2.8" w x 5" h x 0.8" d..... **\$549.99**



**eMAP DELUXE Electronic Map** 12-parallel-channel GPS and internal patch antenna with basemap showing cities, interstates, exits, etc. • Large, backlit screen • Zoom keys with one-hand rockerpad operation • Trip computer with odometer, stopped/moving/total time, moving/overall average and max. speed • Map page with direction, speed, time, distance/time to go, trip distance • Save up to 500 sites • 2000 track points • 12 hours on 2 AA's • Interface cable, 8MB data card, wrist strap • 2.4" x 5.5" x 0.8", 6.7 oz..... **\$209.99**



**eTrex (left)** 12-parallel-channel GPS receiver and internal patch antenna packaged in a waterproof case. Side operating buttons for larger display. Simple menus and logical operations make position marking easy. • Compass or map navigation • Zoom keys • 500 user waypoints with name and graphic • 1 route with 50 waypoints • Resettable trip computer • Auto track log, 10 saved tracks to retrace a path • Up to 22 hours of use with 2 AA alkalines • 4.4" h x 2" w x 1.2" d, 5.3 oz..... **\$119.99**

**eTrex Summit™ Hiking Companion (right)** Similar to the eTrex but includes a barometric altimeter and electronic compass..... **\$199.99**

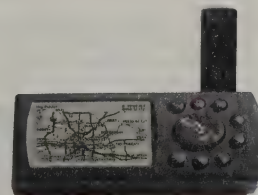


**GPS-III PLUS Personal Navigator™** Dash mount. Road maps without plug-in cartridges. Selectable vertical or horizontal display. Dedicated keys for zooming from 0.2-360 miles, diagonal panning, auto start/stop timer, average/max. speed recordings. Rocker keypad, backlit LCD, full featured moving map plotting, user selectable navigation screens for compass or graphic highway guidance. Download data from MapSource CDs..... **\$299.99**



**STREET PILOT** Dashboard Mount Built-in map of the Americas with state and country boundaries, lakes, rivers, cities, state/interstate highways and some local thoroughfares. Accepts Garmin cartridges showing residential streets, addresses and points of interest. Large high resolution display • 3-level, amber, backlit screen and keypad • Auto turn-by-turn guidance with manual route selections • Auto waypoint and route naming • Storage for 100 waypoints • Trip planning • Zoom key • Dashboard screen showing current trip segment, distance, direction • Clock and arrival alarms. Up to 16 hours on 6 AA's..... **Closeout \$399.99**

**ST PILOT III DL StreetPilot III Deluxe (right)** Portable GPS with auto routing and voice prompts alerting to upcoming turns. Shows position on a detailed color map. Automatically calculates a route from current location and displays turn-by-turn directions. Included MapSource™ City Navigator™ software provides more map detail, and, with downloaded detail, look up points of interest and view address and phone information. Portable for use in multiple vehicles. Also includes: StreetPilot III satellite navigation system • Dash mount • 12V adapter cable with speaker • 128MB data card • USB programmer for faster map downloads... **\$699.99**



**GPS-V DELUXE** North American turn-by-turn navigation with auto-routing for the shortest, fastest routes. Display prompts and audible alerts for turns, upcoming turns, course deviation, and distance to destination. Built-in, routable basemap provides detail for interstates, interstate exits (USA only), highways, North American rivers and lakes, plus commonly used metro streets. Maps from MapSource MetroGuide gives guidance to residential street-level detail. Look up services and points of interest. View address, phone number and map location. 500 user waypoints • 20 reversible routes • Trip computer with odometer, stopped time, moving/overall average or total time, maximum speed • Auto track log, 10 saved tracks • Operates on 4 AA batteries up to 25 hours • Permanent data storage • Water-resistant • Includes auto mount, cigarette lighter adapter, PC cable and City Select software with an all-unlock (no internet access required) • 2.32" h x 5.0" l x 1.62" w, 9 oz..... **\$399.99**

*Software compatible with some Magellan and Garmin GPS units can be found under "Multi Media."*



The Meridian™ – Magellan's new premier line of rugged GPS handheld receivers, designed with serious navigators in mind.



**MERIDIAN™ GPS** The most affordable of the Meridian line, but low price doesn't mean sacrificing features. Expanded memory capacity for downloading maps with optional SD cards in 8, 16, 32 and 64MB • Large backlit display for easy map viewing • Rugged rubber armoring and high impact plastic for use in the harshest environments • Supports several languages including: English, French, German, Swedish, Finnish, Spanish, Italian, Portuguese, Dutch • Save Track-to-Route • Satellite status display • Built-in help • North-Finder with sun/moon positions • Sunrise/set calculator • 2MB database of U.S. cities, interstate/ state highways, political boundaries, major waterways and airports • Store 20 routes, 500 waypoints and 2,000 track-points • Vertical profile of track\* • Horizontal profile\* • Address Search \*\*..... **Closeout \$169.99**

**MERIDIAN™ GOLD** (middle) All features of the Meridian GPS, with additional 16MB database of U.S. cities, highways, political boundaries, major waterways and airports ..... **\$249.99**

**MERIDIAN™ PLAT** (right) Meridian™ Platinum Possesses all features of the Meridian Gold and adds electronic compass and barometer that tracks barometric pressure like a weather station ..... **\$349.99**

#### MERIDIAN COL

Meridian Color is the top of the Magellan™ Meridian line of superior, rugged GPS receivers. Shows you where you are on the industry's first full-color screen in a handheld GPS. Plus, it comes preprogrammed with an extensive 16 MB map, including highways, major roads, parks, navids, waterways, airports and more. • New, vivid color, 120 x 160 pixel display • Superior tracking even in dense foliage and urban environments

• 16 MBs of built-in North American street maps and navids • Rugged design with high-impact housing of wrap-around rubber – it floats! • Infinitely expandable via industry-standard Secure Digital memory cards • Up to 13 hours of continuous battery life • Use optional MapSend™ CDs to map out fishing, hunting or business trips • Includes 2 AA batteries, PC cable, lanyard • 6.5" h x 2.9" w x 1.2" d, 8.5 oz ..... **\$499.99**

\* Requires MapSend™ Topo for United States

\*\* Requires any version of MapSend Software

Software compatible with some Magellan and Garmin GPS units can be found under "Multi Media."

All SporTracks feature 12-parallel-channel, WAAS receiver • Satellite tracking with advanced Quadrifilar Helix antenna • 2.3" x 1.4" display • Backlit screen and keypad • 500 waypoints • 20 routes • 2000 track points • 76 datums • Indefinite data back-up, stored in non-volatile flash memory • Multi-language • Impact resistant, waterproof case

**SPORTRAK** Sporty, GPS system with worldwide database of major cities. Includes worldwide city points-of-interest. • 1 MB built-in memory for additional points • 9 screens: Status, Position, Nav 1, Compass, Nav 2, Plot, Road, Speed, Time • Alarms for proximity, arrival, anchor, cross track, error and GPS • Satellite status • Northfinder sun/moon positions • Sunrise/set, best fish/game calculators • Up to 14 hours use on 2 AA's • 5.6" h x 2.2" w x 1.3" d, 6.1 oz ..... **\$169.99**

**SPORTRAK MAP** A sporty, pocket-size, GPS system that includes mapping • 2MB database with interstate/state highways, parks, waterways, airports and cities • 4MB memory for downloads • 7 user-configurable screens: Map, Compass, Large Data, Position, Road, Speedometer, Trip Compass • Full 3D topo support • Alarms for proximity, arrival, anchor, XTE and GPS • Save-track-to-route • Satellite status display • Built-in help • Northfinder sun/moon positions • Sun-rise/set, best fish/game calculators • Horizontal profile and address search • PC cable • 2 AA batteries for up to 14 hours • 5.6" h x 2.2" w x 1.3" d, 6.1 oz ..... **\$199.99**

**SPORTRAK PRO** Pocket-sized GPS with 32MB memory • 9MB database (interstate/state highways, major roads, parks, waterways, airports, cities, and marine navigation aids) • 23MB memory for downloads • Full 3D topo support • 7 user-configurable screens: Map, Compass, Large Data, Position, Road, Speedometer and Trip Compass • Alarms for proximity, arrival, and anchor • Save-track-to-route • Satellite status display • Built-in help • Northfinder with sun/moon positions • Sunrise/set, best fish/game calculators • Horizontal profile and address search • PC cable • 2 AA batteries for up to 14 hours • 5.6" h x 2.2" w x 1.3" d, 6.1 oz ..... **\$269.99**

**SPORTRAK COL SportTrak** Color Vibrant, high resolution, color screen plus enhanced features in a handheld GPS with 32 MB built-in memory. • 9MB North American basemap (roads, waterways, parks, airports, marine navids, buoys, etc.) • 23MB memory for additional downloads • Accuracy in all orientations – 3-axis electronic compass orients you no matter how you hold it • Built-in barometer • Waterproof and built tough • Includes 2 AA batteries, PC cable, lanyard • Easily fits in a pocket, 5.6" h x 2.2" w x 1.2" d, 6.8 oz ..... **\$449.99**

#### MARINE

##### HH-940P

Marine VHF HT (left) All US, international, Canadian and 10 weather channels

• Program memory • All channel scan • Instant channel 16 and 9 • Triple watch • Weather alert • Electronic touch controls • Twist dialer LCD • 1W • Keypad lockout • Submersible • Rechargeable NiCad, belt clip, wrist strap, drop-in charger • 2.5" w x 1.25" d x 4.813" h, 8.8 oz ..... **Closeout \$99.99**

**ATLANTIS** Handheld 2-Way VHF Marine (right) Durable, reliable for any marine activity • All US/international channels • Waterproof • 5/1W output, switchable • Instant channel 16/9 • Triple watch • All N.O.A.A. channels with WX alert • Backlit keypad • Memory channel scan • Flexible rubber antenna ..... **Closeout \$99.99**

**VOYAGER** Ultra Compact VHF Handheld Marine Radio All USA, Canadian and international channels • All N.O.A.A. channels with S.A.M.E. weather alert • Triple Watch Plus™ • Channel 16 and 9 • Memory scan • 1W/SW transmit • Backlit keypad and display • Rubber grips/seal • Li-ion battery • AC and DC adapter and charging cradle included • Flexible rubber antenna • Meets JIS7 waterproof specs • 3.8" h x 2.4" w x 1.3" d, 8.8 oz ..... **\$159.99**



**POLARIS** VHF Marine with Digital Selective Calling and Hailer (bottom) All USA, international and Canada channels • Instant channel 16/9 • 1/25 W transmit • Wireless mic capability – works with up to two wireless mic accessories • GPS input capable • Backlit LCD and keys (including mic) • S.A.M.E. weather alerts • Triple Watch Plus™ • 2-way hailer • Memory and weather scan • Assign channel names • Group call feature • Calling radio position indications with external GPS • Waterproof to JIS4/CRF46 standards • 3.07" h x 7.24" w x 6.61" d, 2.65 lbs ..... **\$179.99**

**OCEANUS** VHF Marine Radio (not pictured) All USA/international marine channels • 25/1W output • Compact, rugged construction • QuikCommand™, one-touch channel 16/9 key on mic • Rubber grip mic • Backlit keypad • Triple watch • Memory scan • Weather alert/scan • LCD and dimmer • External speaker jack • PA ..... **Closeout \$129.99**

**SOLARA** 25W VHF Marine Radio (top) Full-featured • All USA/international channels • Instant channel 16 • 10 weather channels • Selectable 1/25 Watt output • High visibility LED display • Front mounted speaker for improved sound quality • Transmit LED indicator • Weather resistant housing, microphone and connector ..... **\$99.99**





# Icom... **more** than just Ham gear!

## IC-A23 **Avionic Radio**

Icom is the name pilots have come to know and trust. Fly the airwaves with the latest Icom airband transceiver! Its palm size is very convenient for carrying, yet it's full of the useful features you've come to rely on. With water resistant construction for safe operation in rainy conditions. *The IC-A23 has been named "Best VHF Handheld" by The Aviation Consumer magazine in its Gear of the Year issue, 8/02.*

- Full 5 Watt output power
- All 760 com channels (118.000 MHz - 136.975 MHz)
- VOR navigation (Rx only, 108.000 MHz - 117.975 MHz)
- 25 kHz tuning steps
- 200 memory channels with 6 character names
- Built-in voice recorder

## IC-M1V **Marine Radio**

Only one marine radio made its way onto Powerboat Report's Top Ten product list\*: Icom's M1V. Could its long-lasting Li-Ion performance (over 15 hours on 1 charge), waterproof construction (submersible, actually) and reasonable price have had anything to do with the award? Judge for yourself and get one today.

*\*Best products of 2002, 1/03*

- Powerful 5 watts of talk power
- Lithium Ion power = longer battery life
- Ultra compact, JIS-7 grade waterproof transceiver
- Waterproof speaker-microphone operation (optional)
- Extra large LCD with alphanumeric indications
- Simple one-handed operation

## IC-4088A **FRS Radio**

Want professional quality in personal communications? The IC-4088A is an FRS radio that combines simplicity, convenience, and range. Whether cross-country skiing, hiking, or organizing a group of people, this professional quality radio combines rugged construction with the features that you need the most - with no fees or dues! Optional "stubby" antenna version available soon.

- High performance antenna for extended range
- 14 FRS channels and 38 group codes
- Built-in voice scrambler
- Wide selection of optional accessories
- Weather resistant construction
- AA or Ni-Cd battery operation

What are you waiting for?

[www.icomamerica.com](http://www.icomamerica.com)

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# ICOM

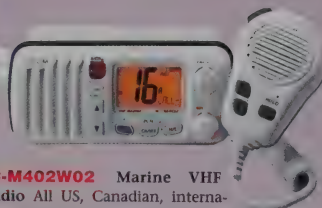
## AIRCRAFT

**A-23** Airband HT Easy to operate featuring large, clear LCD. Record and play back conversations with built-in recorder. Large capacity rechargeable NiMH battery is standard. Convenient for carrying with supplied belt clip. Water resistant, JIS-4 grade, allows safe operation in rain. 5W (PEP), 1.5W (carrier) output • All 760 "COM" (108MHz-136.975 MHz) and weather channels • VOR navigation (rx only) • 200 alphanumeric memories • PC programmable • 2.28" w x 4.22" h x 1.13" d, 12 oz. **\$399.99**

## MARINE

**IC-M3A** Mini Handheld Marine VHF Radio (left) All US, international and 10 weather channels with alert • Independent channel 16 • Full function and priority scanner • Dual and tri-watch monitors channel 16 while operating another • 1/5W • Backlit display • Water resistant • Includes 6 NiCads and wall charger • 2.25" w x 5.5" h x 1.75" d, 14.4 oz. .... **\$159.99**

**IC-M1V** Marine Handheld (right) All US, Canadian, international and weather channels with alert • Normal and priority scan • "Tag" scan system • 5W • Dual/tri-watch • PC programmable • Alphanumeric • Waterproof • 1400mAh li-ion battery • 2.1" w x 5.5" h x 1.18" d, 9.9 oz. .... **\$199.99**



**IC-M402W02** Marine VHF Radio All US, Canadian, international and 10 WX channels with alert • Normal/priority scan • Dual/tri-watch • 2-digit LCD with scrolling channels • 4-level backlighting • Key illumination • DSC capability • Built-in SC-101 selective calling • GPS repeater (with added GPS) • "Tag" scan • 25W/1W • Waterproof • 6" w x 2.6" h x 5.5" d, 2 lbs. .... **\$199.99**

### IC-M45AW

VHF • 25W Marine Transceiver Water-resistant gaskets, including mic • One-piece aluminum diecast chassis • Large backlit display • "Tag" scan system adds/deletes channels at switch push • "Smart" mic changes channels or selects power without using panel • Dual/tri-watch monitors channel 16 while operating another • All international, US channels and 10 weather channels with alert • Instant access to ch. 16 and call channel • Low battery indicator • 0.79" h x 2.36" w x 5.5" d ..... **\$149.99**



**M-710** (21) SSB Marine Transceiver Rugged, 150W, 1136 channels with 160 user-programmable memories, PC programmable, alphanumeric read-out on large LCD. General version without 2182kHz alarm, marine bands only. Special Order **\$1399.99**



**M-802** DSP Marine SSB Transceiver A marine radio with DSP, large backlit LCD with dot matrix characters, and built-in digital selective calling. Also boasts one-touch e-mail and GPS input. • 0.5-29.99MHz rx • 1.6-2.99, 4-4.99, 6-6.99, 8-8.99, 12-13.99, 16-17.99, 18-19.99, 22-22.99, 25-27.5 tx • J3E (SSB), J2B (AFSK) F1B (FSK), A1A (CW), M3E (AM, rx only) • 1355 channels • Selectable 150/60/20W • 9.2" w x 3.7" h x 9.1" d, 10.3 lb. (main) • 8.3" w x 4.4" h x 3.1" d, 1.2 lb. (controller) • 4.4" w x 4.4" h x 3.1" d, 0.8 lb. (speaker) .... Special Order **\$1749.99**

# YAESU

## AIRCRAFT



**VXA-700** "Spirit" Airband, 2M Transceiver (4 transceivers in one!) AM airband, 2M amateur, NAV-COM, 5W output, VOR/CDI display (121.5MHz emergency) • NOAA WX with alert • FM broadcast band receive (88-108MHz) • Submersible at 3' for 30 minutes • Magnesium die cast case (superior RF noise shielding plus ruggedness) • High res, backlit, dot matrix display • 190 alphanumeric memories • Back lit keypad • Supplied with 1300 mAh Li-ion battery, 117V charger, headset adapter, antenna and belt clip ..... **\$419.99**



**VXA-150** Pro V Professional-grade, compact, airband handheld transceiver. Transmits at 5W (PEP), 1.5W carrier output on 118-136.975MHz "COM" band, and receives 108-117.975MHz "NAV" band. Features exclusive two-mode display with upright or inverted viewing when on a belt, NOAA weather monitoring, 8-character alphanumeric display, 50 memories (100 "book"). 2.3" w x 4.3" h x 1" d, 12 oz. .... **Closeout \$269.99**

**VXA-150 DELUXE** Same as above, with addition of antenna adapter and NiMH battery .... **\$299.99**



**VXA-210** Pilot Professional-grade airband transceiver with VOR navigation display meeting MIL-STD 810 ruggedness specs. 5W (PEP) transmit, 1.5W carrier output. Receive on 118-136.975 MHz "COM" and 108-117.975 MHz "NAV" bands. The VOR navigation display features DVOR/CDI modes. Receives all NOAA weather channels. Has 150 memories, and 8-character alphanumeric display. Includes headset adapter, intercom, and external PIT switch. PC programmable. 2.3" w x 4.3" h x 1.2" d, 12.2 oz. .... **C/O \$299.99**

**VXA-210 DELUXE** Same as above, with addition of antenna adapter and NiMH battery .... **\$354.99**

# KENWOOD



## MARINE

**TKM-707** SSB Marine Transceiver A high-performance unit designed to meet stringent marine operation demands. Utilizes heavy-duty, rustproof, aluminum chassis and highest quality parts to maximize performance • 150W RF output • 2-23MHz marine operation with 500kHz-30MHz general receive • 198 memories • Multi-scanning • Emergency alarm built-in ..... Special Order **\$1249.99**

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**AES**  
AMATEUR ELECTRONIC SUPPLY





## SECURITY ITEMS

**PE-319** Pedometer with Personal Security Stay at ease while exercising away at home. This pedometer features a 120dB panic alarm for personal security and emergency. Displays elapsed workout time, distance walked and a 12/24 hour clock on its backlit 2-line LCD display. **\$19.99**

## ALL HAZARDS WEATHER RADIOS

**WR-102** Portable S.A.M.E. Weather Radio A handheld all-hazards weather radio that receives and displays alerts, watches and warnings that apply only to a local area using S.A.M.E. technology

- Monitors 24-hour weather forecasts and alerts
- Scans all NOAA channels
- Monitors U.S. emergency alert system with auto activation
- Dual LED power/alert indicator
- Digital clock land alarm with snooze

**\$49.99**

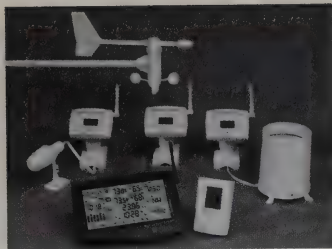


**WR-196T** Desktop S.A.M.E. Weather Radio AM/FM radio with ten memory presets • Digital tuning, including seven NOAA weather channels • Dual LCD display for clock and dot-matrix text message • Automatic audible and visual alert activation plus blinking LED warning • Standby mode to mute speaker • Digital clock, calendar, alarm, and 5-120 min. sleep timer • Operates from 3 AA's or AC adapter • 6.75" h x 5.25" w x 0.875" d, 0.75 lb.... **\$69.99**

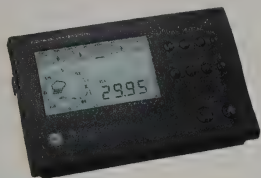
## WEATHER STATIONS

**RG-122** Long Range Rain Gauge Self-emptying and provides cumulative and daily precipitation totals for up to nine days. Its wireless,

long range capability allows the collector to be placed up to 300 ft. from the main unit. The collection data is broadcast at 433MHz to the indoor base unit and displayed on an attractive easy-view 3.5" h x 1.5" d x 2.5" w LCD console. Includes indoor temp. gauge. Requires 2 "AA" batteries in both collector and main units **\$59.99**



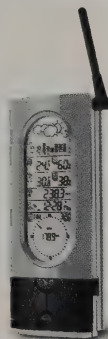
**WMR-968** Cable Free™ Weather Station Innovative wireless outdoor sensors with 300 ft. range operates on solar power for simple installation and sophisticated ease. Track and record over 20 separate weather conditions by a press of the touch-sensitive jumbo LCD display screen **\$399.99**



**WM-918** Complete Weather Monitoring Station Monitors over 20 weather and environmental conditions. Sensor range up to 40'. Self-dumping electronic rain gauge, outdoor temp. and humidity sensor, anemometer (wind speed/direction), and all wiring. Desktop control panel displays clock, calendar, alarm, and weather. Also features weather forecasting displaying local 12/24-hour forecasts. Uses 8 AAA batteries, AC adapter included. 7" l x 4.25" w x 1.5" h, 14.8 oz **\$229.99**

**WMR-112A** CableFree™ Weather Station Uses innovative, wireless, outdoor sensors for simple installation. Operates on 433MHz at a 300' range from remote sensors.

- Measures outdoor temperature (-4°F to 140°F) and relative humidity (25%-95%)
- Measures indoor temperature (0°F to 122°F), relative humidity (25%-95%) and barometric pressure (17.27 to 31.02 in.Hg)
- Indoor touch-screen console, wall mount or desktop
- AC adapter
- Requires 12 "AAA" and 6 "AA" batteries (not included)
- 7.75" h x 3.5" w x 1.4" d **\$199.99**



## OTHER WEATHER PRODUCTS

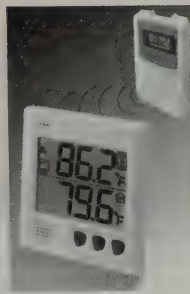


**RM-116E** Exactset™ Radio Controlled Clock (left) The most accurate of alarm clocks. Sets itself automatically by receiving time signals from the U.S. Atomic Clock. Features blue HiGlo™ backlight LCD, snooze, day/month/seconds and automatic adjustment for Daylight Savings Time..... **\$29.99**



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**Cable Free™** Thermometer The latest in radio frequency technology! This Cable Free™ thermometer with jumbo display shows you the indoor temperature and the temperature from up to three remote locations. Includes one easy-to-install remote temperature sensor that can be placed up to 90 feet from the main unit - with no wires to install anywhere! • 433MHz operation • High/low memory and temperature alarms • Choose and change between Celsius and Fahrenheit • Includes one wireless sensor. **\$29.99**



## Emerson

**ESR-220** Solar/Dynamo-Powered Radio and Flashlight

Built-in NiCad recharges using the solar panel or dynamo generator. Install 3 AA batteries (back-up only). Also power and recharge using optional AC adapter • Bright beam flashlight with two modes: steady or flashing • Warning siren feature, use alone or with flashing light • Built-in antenna • 8.5" x 3.5" ..... **\$29.99**



**PDC-803** Electronic LCD Digital Compass Easy-to read LCD screen displays heading as a cardinal point (e.g. N, NW, SE) with numeric digits in degrees (e.g. 17°) plus a directional compass arrow • Backlight for night use • One touch calibration corrects for local magnetic interference • Mounts on dashboard with velcro • 3 AAA batteries included • 1.875" w x 3.625" h x 2.75" d, 4 oz ..... **\$29.99**



## uniden



**WX-500** Receives all 7 NOAA weather channels and provides multiple weather alerts through text messages, alert tones, and actual broadcasts. S.A.M.E. alert (specific location codes are broadcast alerting users to severe conditions in immediate area). A 9-volt battery back-up in the event of a power failure. Alarm clock feature uses the large LCD readout, which has selectable backlight control. DC lighter adapter cord and 120V AC adapter included. 5" w x 5" w x 1.875" d, 19 oz. C/O **\$39.99**





## WEATHER STATIONS

**WS-2010** Professional Wireless Weather Station Indoor temperature (32°F to 158°F), humidity, and barometric pressure (from remote) • Outdoor temperature and humidity (wireless, solar powered) • Min/maximum data for all readings with time and date recorded • Air pressure with 24-hour bar chart history • Forecast icon and pressure trend indicator • Wireless rain gauge (solar powered) tracks rainfall amount for last hour, last 24 hours, total • Wireless wind-gauge (solar powered) tracks speed and direction - up to 330° range • Includes wind-gauge, rainfall sensor, indoor temperature/humidity sensor, and outdoor temperature/humidity sensor • Receiver and sensors require alkaline (not included) • Free standing or wall mount • 8.5" w x 1.25" d x 6.5" h (receiver) ..... **\$389.99**



**WS-2010-13** PC Interface for WS-2010 Wireless Weather Station Connects to serial port • Receives and stores all data • Included software calls in data and removes from interface, storing in a data file • Without computer connected, can act as a data logger, storing several days collected data • Selected data can be exported as an ASCII file for use in other WIN 95/98 programs (Excel, etc.) • Generate graphs, charts, and data lists • Operates on 2 AA batteries (not included)..... **\$129.99**

**WS-2310** Wireless/Wired Weather Center Direct cable, or up to 80' away, wireless • WWVB-controlled clock shows day, date, minute, second, alarm, and time zone • Weather forecast with animation • Indoor/outdoor temperature and humidity, wind chill, dew point, rainfall (24 hrs, 1 hr, and total) • Wind speed (m/s, knots, bft, km/h, and mph) and direction with trend • Barometric pressure • Alarms: time, storm warning, weather (air pressure, temperature, humidity, rainfall, wind speed, and wind direction) • Stores up to 175 sets of weather data in memory for weather analysis and graphical display on PC (software CD-ROM and cables included) • Uses 3 AA batteries (not included) or included AC adapter..... **\$249.99**

**Used & Demo**  
Equipment lists

Updated regularly on the web.  
Check them out and order **On-line**

**WS-8015U** Deluxe Sun/Moon Wireless Weather Station Calculates sun/moon rise and set and moon phase based on choice of 250 North American cities • Indoor and remote temperature and humidity • Barometric pressure with 30-hour history chart • Forecast icon, based on changing air pressure, about 75% accurate for 12-20 hours • WWVB-controlled 12/24-hour time and date • Temperature alarm for remote temperatures • Storm warning indicator • Receiver and remote require alkaline batteries (not included) • One remote sensor included, can receive as many as three remotes, up to 80 ft. range • Wall mount or free-standing utilizing fold-out stand ..... **\$159.99**

**WS-9016U** Sun/Moon Wireless Weather Station WWVB-controlled time with manual settings • Calendar display, date, time zone • Alarm function with adjustable snooze • Sun/moon data for 45 U.S. locations • Weather tendency and air pressure trend • Indoor temperature and humidity display • Min./maximum outdoor temperature record with time • Receiver and remote require alkaline batteries (not included) • 4" w x 1.4" d x 6.75" h ..... **\$79.99**

**WS-7038UF** Wireless Rain Gauge Receives rain data from included, remote, self-emptying, rainfall gauge located up to 80' away • Shows rainfall for past hour, 24 hours or last rain period until manually reset • Rainfall history - view last 7 days, weeks, or months - scroll period by period on graph • Rain alarm function • Wall mount or free-standing with removable stand • 12/24-hour time mode, manual time set • Receiver/remote use 2 AA alkalines each (not included) • 3.5" w x .75" d x 4.2" h (receiver) ..... **\$59.99**

**WS-7075UF** Wireless Forecast Station Indoor/remote temperature, indoor humidity • Forecast icon, based on changing air pressure, about 75% accurate for 12-20 hours • WWVB controlled 12/24-hour time, dual time alarms with snooze • Receiver and remote require alkaline batteries (not included) • Wall mount or free-standing with removable stand • 4.5" w x 1.0" d x 7.0" h • 80' range.. **\$59.99**

**WS-7013U** Wireless Temperature Station Indoor/remote temperature with minimum and maximum memory (time recording for remote temperature) • 12 or 24-hour mode, manual set time • Wall mount or free-standing (removable) • Receiver and remote use 2 AA alkalines each (not included) • Up to 80 foot range • 2.75" w x 4.25" h x 1.0" d (receiver) ..... **\$24.99**

## OTHER WEATHER PRODUCTS

**WT-5431** Projection Alarm with Remote Temperature • 12 or 24-hour time, dual alarm with snooze • WWVB control, month/day, date • Time zones, GMT to 12 hours • Indoor and remote temperature • Projects from 3-10 feet onto wall or ceiling with adjustable rotation, intensity; auto focus • Backlit display when a button is pressed • Wall transformer (included) or 3 AA alkalines; remote requires 2 AAA's (not included) • 5.25" w x 3.5" h x 1.25" d..... **\$49.99**

**IR-101** Infra-Scan Infrared Thermometer Measure temperature in a fraction of a second without touching the object being measured. Useful for contact-free measurement of stationary and moving objects, finding cold spots in a home, checking food stuffs, heating and air conditioning, hot components (machinery, engines, etc.) • Single key operation • Back-lit LCD • Temperature range: -4°F to +572°F • Uses 4 LR-44 button cells (included) • 2.2" w x 0.9" d x 4" h ..... **\$49.99**

**WS-8017U-OAK** Atomic Clock with In/Outdoor Temperature and Moon Phase Radio-controlled analog wall clock that sets itself using transmissions received from WWVB and the U.S. Atomic Clock in Colorado. Remote wireless outdoor temperature sensor/transmitter works on 433MHz, up to 82 feet away. Black with oak trim. • 12/24 hour time display (hour, minute, second) • Alarm setting with snooze • Calendar display • Weekday display (select English, French or Spanish) • Current moon phase display • Time zone setting • Daylight savings time ON/OFF • °C or °F temperature display selectable • Desk or wall mount • Clock and transmitter require 2 AA's, not included • 12.2" w x 8" h x 1.2" d (clock) • 1.6" w x 5" h x 0.9" d (transmitter) ..... **\$39.99**



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# DAVIS

## WEATHER STATIONS

Sophisticated, professional quality for home, business, or scientific use. Add WeatherLink for detailed, long-term analysis using a PC. Standard weather stations assemble quick and easy with plug-in cable connections using modular RJ connectors. Cables are connected to the console through a junction box with 8' cable. Console includes AC power adapter with battery backup (not included).

All stations include • Time in 12/24-hour format and date • U.S. and metric measure • Highs and lows • Calibration of some functions for increased accuracy under difficult conditions • Sequential scan and display of readings • Alarms for selected functions • Console with LCD and reversible base for use on desk, shelf, or wall • Anemometer with 40' cable



**7440 Weather Monitor II** Shows all weather monitoring functions and clock on an back lit, 1.875" x 4.375" LCD display. • Temperature readings of -50 to 140°F (outside), 32° to 140°F

(inside) • Wind calculations, including direction in 1° or 10° increments, speed to 175mph, and high wind speed and wind chill to -134°F • Barometer measuring barometric pressure with memory recall and trend arrow • Indoor high and low humidity from 10%-90% (outside optional) • Alarms for temperature, wind speed, wind chill, humidity, time and barometric trend • 5.25" x 5.875" x 3" ..... **\$269.99**

**7859 External Temperature/Humidity Sensor** For 7440. Measure outside humidity, dew point and temperature. Includes 40' cable ..... **\$119.99**

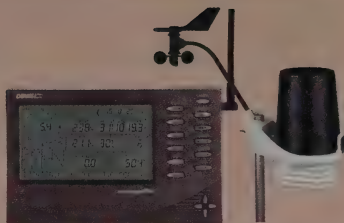


**7425 Weather Wizard III** Offers most monitoring features of the Weather Monitor II, except barometric pressure and inside humidity. Measure daily and accumulated rainfall with optional rain collector. Optional Weather-Link software will process and store data through an IBM®-compatible or Mac®.

• Metric or U.S • 5.25" x 5.875" x 3" ..... **\$179.99**

**7852 Rain Collector II** For 7440, 7425 and 7415. Read both daily and accumulated rainfall in 0.01" increments. Comes with 40' cable ..... **\$69.99**

**7400 Perception II** State-of-the-art weather technology. Ideal for keeping track of climate conditions inside the home. No installation required. Looks similar to 7425. • Indoor temperature -32°F to 140°F • Barometric pressure with memory recall • Humidity • Alarms for temperature, humidity, time, and barometric change ..... **\$139.99**



**6150 Wireless Vantage Pro** The latest in weather technology! Offers forecasting, on-screen graphing, and more. Monitors barometric pressure, temperature, humidity, rainfall, and wind speed and direction. Quick view icons show the forecast at a glance - sunny, partly sunny, cloudy, rain or snow, while a moving ticker-tape display gives more details. An innovative integrated and solar powered sensor suite combines rain collector, temperature and humidity sensors, and anemometer into one package - making setup easier than ever and improving performance and reliability. Typical wireless range is up to 150-200ft. For improved accuracy, the temperature and humidity sensors are housed inside a shield which protects solar radiation and other sources of radiated and reflected heat ..... **\$539.99**

**0281 Wind Wizard™ Wind Speed Indicator** Handheld unit accurately measures wind speed from 0-60MPH in miles/hour, meters/sec., and Beaufort. Readout dial is supported by sapphire jewel bearings and steadied by a rare-earth, magnetic, damping system. Folding handle latches securely into place. No batteries needed. 3.625" x 2.875" x 1" folded, 2.5 oz ..... **\$47.99**

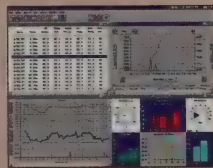


**0271 TurboMeter™ Wind Speed Indicator** A turbine, suspended on sapphire jewel bearings, responds to the lightest winds • 3-digit LED display for viewing in sunlight or at night • Reads speed in miles/hour, knots, feet/minute, or meters/second. • Requires 3 "AAA" batteries (not included). 5.625" h x 2.625" w x 1.125" d, 3 oz ..... **\$139.99**

## SOFTWARE

**7852/7856**

**WEATHERLINK®** Links PerceptionII, Weather WizardIII, or Weather Monitor II to a PC or Mac. Create graphs, calculate average conditions, generate summaries, analyze trends, and more ..... **\$149.99/\$139.99**



# MIDLAND



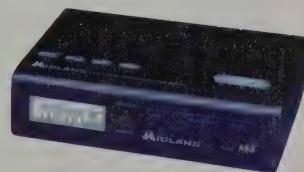
**WR-300** Specific Area Message Encoding Weather Radio • 20 programmable counties • AM/FM and 7-channel weather radio • Time and alarm clock with full date display • 10 memory channels • Ability to add up to 8 alerts (i.e. AMBER) • Ability to remove alerts (i.e. flood - if you live on a hill) • Choose between single, multiple, or all-county codes • Uses analog and digital signaling.. **\$49.99**



**WR-30** Weather/Hazard Alert Radio with FM Radio and S.A.M.E. Alert function allows the user to set the weather radio to sound an alert when it receives a weather or hazard broadcast from NOAA. • Monitor up to 20 user-selectable areas • Digital front message displays 56 types of S.A.M.E. watches or warnings • Warning siren and voice alert • Alert status lights for Statement-Watch-Warning • FM radio, with 5-station memory, automatically switches to weather alert when NOAA broadcasts an alert • Built-in digital clock • Backlit display • Telescoping antenna and external antenna jack • Operates on AC power or 4 AA battery backup • 7.25" w x 5" h x 1.75" d ..... **Closeout \$44.99**



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**74-200** Digital Weather/Hazard Alert Monitor Provides 24-hour National Weather Service information from 7 NOAA channels for maximum capability up to 50 miles. Eight-character LCD displays up to 56 types of S.A.M.E. watches or warnings and monitors status of user selectable warning system. Weather Command button switches from alert mode to full monitoring. Clock displays time and date and has alarm functions. Telescoping antenna, external antenna input and alert device output jacks. Operates from 9-14VDC and 117VAC with supplied adapter. Accepts 9V battery for backup during outages. 7.75" w x 2" h x 5" d, 18 oz. **\$49.99**

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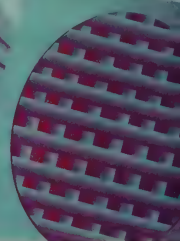
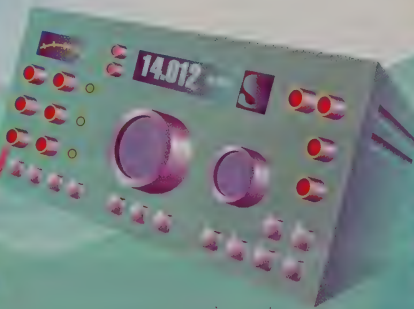
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ORLANDO AMATEUR RADIO CLUB







## SINGLE BAND HANDHELDS

The AT-201HP and 401HP are advanced single band HT's with 40 memory channels, programmable band scan, auto repeater offset, frequency or channel display and more. The units have rugged metal cases with backlit keypads and displays. 12V batteries come standard, providing 5W of RF power. • MARS/CAP capable • 40 memories • CTCSS enc/decode • Programmable band and memory scan • DTMF paging • Dual frequency watch • Auto repeater offset • User selectable frequency or channel display modes.

**AT-201HP** 2M Handheld Transmit: 144-148MHz • Receive range: 130-179MHz • 4.25" h x 2" w x 1.3" d excluding battery pack ..... **\$99.99**

**AT-401HP** 70cm Handheld Transmit: 430-450 MHz • Receive: 420-470MHz • 4.25" h x 2" w x 1.3" d excluding battery pack ..... **\$159.99**

### Available Accessories

CBP262 6 AA NiCad battery holder, CHA072 Wall charger for RBP072, CHA120 Wall charger for RBP120/RBP22, PCA145 Cigarette lighter cable, RBP120 12V 700mA NiMH, SD911 Rapid charger, SLC200 2.5W carrying case, SLC200L 5W carrying case



**PR-52** 6 Meter Handheld Transceiver Expands your horizons beyond "average" VHF operation, and onto the enjoyable 6m "DX" band. The 5-watt, palm-sized unit brings you the portability and power you need to fully explore a great VHF band. Other features include 5W output with included NiCad battery pack • MARS and CAP capable • Built-in CTCSS encode and decode • 40 memory channels store any tone or offset • Direct frequency entry using 16 button keypad • Frequency or channel display modes • PC program capability or cable cloneable • Transmit: 50-54 MHz • Receive: 40-54MHz • 4.25" h x 2" w x 0.25" d excluding battery pack.. **Closeout \$159.99**

### Available Accessories

CBP263 AA battery case, PTC001 Mobile power pack, RBP22H 12V 1000mA NiMH, SD911 Rapid charger, SLC22L Leather case



## SINGLE BAND HANDHELDS

**DJ-196T** 2M HT 5W output • 135-174MHz rx • 40 multi-function memory channels • MAR/CAP capability • Alpha-numeric display • CTCSS tone encode/ decode and DCS • S-meter • Auto dialer • Cable cloning • PC programming capability • Theft alarm • Experimental insect repel • Back lit keypad • 4.9" h x 2.2" w x 1.6" d, 13.2 oz..... **\$139.99**

**DJ-296T** 222 HT Same as DJ-196T except has a range of 222-225MHz **\$179.99**

**DJ-496T** 440 HT Same as DJ-196T (above) except has a range of 430-450MHz..... **\$149.99**

### Available Accessories

EB6 Mobile HT bracket, EBP48N 9.6V 700mA 5W NiCad battery, EBP50N 9.6V 700mA 5W NiMH battery, EBP51N 9.6V 1500mA 5W NiMH battery, EBP56N 7.4V 1000mAh lithium battery, EDC111 Charger for EBP56N, EDC16B Cigarette lighter cable and filter, EDC36 Angle plug power cable with filter, EDC37 13.8V power cable, EDC43 Cigarette lighter cable, EDC88 Rapid charger, EDC97 NiMH quick charger, EDH30 Dry cell battery case, EME12 Headset/earphone/ microphone with VOX, EME13 Headset/ear bud/ microphone with VOX, EME15 Earphone/microphone with VOX, EME17 Boom earphone microphone, EME20 Tie-pin mic/earphone, EME6 Earphone, EMS47 Speaker microphone with volume control, ERW4 PC cable, ESC36 Soft case for EBP48N



# The Xtreme Communications Xperts!

## DM-330MVT Communications Grade Switching Power Supply

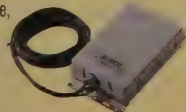
*Alinco's Xperts have reinvented the power supply!*

Xtremely quiet with a patented noise shift circuit, but we'll be surprised if you ever need to use it. It's small, lightweight and powerful! 30A continuous, 32 A peak output, but weighs less than 5 lbs. Variable output from 5 ~ 15 VDC, memory output setting, lighted V/A meter, front panel cigar (10A) and quick-connect (5A) terminals, rear panel high-current connections. Ripple less than 15 mV p-p. **Xtra versatile, use for travel, station or test bench.**



## EDX-2 Automatic Wire Antenna Tuner

**Xtreme users want to get on the air fast!** Ground it, connect a wire and plug it into your rig. Tunes random length wires from 9 ~ 80 feet. Covers 160 ~ 10 meters. (minimum 40 feet of wire needed for use on 160m) Compatible with DX-70 and DX-77 transceivers. Made for indoor/outdoor mounting, use at home, mobile or in the field. Outputs directly to a wire or whip antenna only (no coax output).



## DJ-X2000T Multimode Wide Range "Intelligent" Receiver

**Monitoring Xcitement** is found in the "Intelligent Receiver" from 100 KHz ~ 2150 MHz\* with 2000 memory channels, alpha-numeric labeling, receives AM, WFM, NFM, LSB, USB, CW and FM stereo. \*\* On-line "help" feature, 20 scan programs, computer programmable (download free software from Alinco website), Channel Scope™ display, Transweeper™, RF frequency counter, digital sound recorder, CTCSS decode, 2 level attenuator, field strength meter, **instant "flash tune" and many Xtras!**

## DJ-X3T Multimode Wide Range Communications Receiver

**Xceptional and unique!** Small but powerful. Receives 100 KHz ~ 1.3 GHz\*, AM, NFM, WFM. 700 memory channels, NiMH battery, four scan modes, stereo FM reception. \*\* **Download free control software from www.alinco.com**

## DJ-X10T Multimode Wide Range Communications Receiver

**Xtraordinary reception** from 100 KHz ~ 2 GHz\* with 1200 memories, alphanumeric display, Channel Scope™ Display, receives WFM, NFM, USB, LSB, AM and CW. Internal HELP feature, seven scan modes, clock with on/off function, "new user" and "eXpert" operating modes, BNC antenna connector, cloning function, **and an Xtensive array of custom settings.**



**www.ALINCO.com**

\*Distributed in North America by ATOC Amateur Distributing LLC, 23 S. High St., Covington, OH 46318, (937) 479-2842

\*Cellular blocked in USA. Unblocked versions available to qualified users, documentation required. \*\*Optional stereo headphones required. Specifications subject to change without notice or obligation.





**DJ-511T** Sub-Miniature VHF HT TX/RX: 144-148 MHz • 340 mW output • 20 multi-function memories plus 1 call • Encoder installed (50 tones) • Illuminated display • Use 3 AA or NiCad battery • Pivoting antenna • 4" h x 2" w x 1" d, 6.5 oz..... **\$79.99**

**Available Accessories**

EB6 Mobile HT bracket, EDC78 Wall charger (not alkaline), EDH18 12V/5.5V DC cigarette lighter plug, EME12 Headset/earphone/microphone with VOX, EME13 Headset/earbud/microphone with VOX, EME15 Earphone/microphone with VOX, EME17 Boom earphone microphone, EME20 Tie-pin mic/earphone, EME6 Earphone, EMS47 Speaker microphone with volume control, ESC27 Soft case

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**



**DJ-540T** Pocket-sized UHF HT Covers 420-450MHz, with receiving capabilities beyond the range. 500mW power output but can be increased to 1W by using the optional NiMH battery or external DC supply. • 100 memories • Call channel and several scan modes • Newly designed case that conceals the speaker but provides loud, clear audio • 38 CTCSS encode/decode settings (decode standard) • 4 tone bursts, making it usable for repeaters in many parts of the world • Large, easy-to-read, illuminated display • Experimental "mosquito repelling feature" • Theft alarm function • Cloning capability • Use with cross-band transceivers (base or mobile dualband) as a "remote mic" ..... **\$89.99**

**Available Accessories**

EB6C Mobile HT bracket, EBP52N 3.6V 500mAh NiMH battery, EBP53N 6.0V 500mAh NiMH battery, EBP54N 3.6V 1500mAh NiMH battery, EDC105 Drop-in NiMH charger without power supply, EDC37 13.8V power cable, EDC43 Cigarette lighter cable, EDC93 Wall power supply for EDC105, EDH31 Dry cell battery case, EME12 Headset/earphone/microphone with VOX, EME13 Headset/earbud/microphone with VOX, EME15 Earphone/microphone with VOX, EME17 Boom earphone microphone, EME20 Tie-pin mic/earphone, EME6 Earphone, EMS47 Speaker microphone with volume control, EMS8Z Remote speaker mic, ERW4 PC cable, ESC37 Soft case



**DUAL BAND HANDHELS**



**DJ-596T** 2M/440MHz Dual Band HT The first Amateur HT to support optional digital voice communications. • SW output on both bands with standard NiMH battery • Wide or narrow FM • Digital voice with optional EJ-43U board • Extended receive capabilities • CTCSS and DCS encode and decode • Three scan modes • Work and save in memory any number of "odd split" transmit/receive offsets • Illuminated keys and display • Large display shows alphanumeric designations for each of the 100 memories • Theft alarm and experimental "mosquito repelling sound" • 9 autodial memories • External terminal control can output 5 VDC @ 5 mA from the mic jack, which can be used by experimenters to control external devices • Operates on 6-16VDC, battery charges while on external source • 4.9" h x 2.2" w x 1.6" d, 13.2 oz..... **C/O \$209.99**

**DJ-596T MK II** Same as above with addition of ± 2.5ppm crystal and new digital board..... **\$209.99**

**Available Accessories**

EB6C Mobile HT bracket, EBP48N 9.6V 700mAh 5W NiCad battery, EBP50N 9.6V 700mAh 5W NiMH battery, EBP51N 9.6V 1500mAh 5W NiMH battery, EBP56N 7.4V 1000mAh lithium battery, EDC111 Charger for EBP56N, EDC16B Cigarette lighter cable and filter, EDC36 Angle plug power cable with filter, EDC37 13.8V power cable, EDC43 Cigarette lighter cable, EDC88 Rapid charger, EDC97 NiMH quick charger, EDH30 Dry cell battery case, EJ43U Digital board for 596T, EJ47U Digital board for 596T/MKII, EME12 Headset/earphone/mic with VOX, EME13 Headset/earbud/microphone with VOX, EME15 Earphone/microphone with VOX, EME17 Boom earphone microphone, EME20 Tie-pin mic/earphone, EME6 Earphone, EMS47 Speaker mic with volume control, ERW4 PC cable, ESC36 Soft case for EBP48N, SW596 Windows programming software

**DJ-V5TH** VHF/UHF Dual Band FM HT Full 2 meter and UHF Amateur band coverage • Standard high-power 700 mAh NiCad battery pack – up to SW output • 3 output settings • Expandable receive range 76-999MHz (cellular blocked), includes wide FM capability • Split-band operation capability • Eight different tuning steps • Alphanumeric display – up to 6 characters • 200 memory channels plus two call channels • CTCSS encode/decode

• DTMF squelch • 4 different European tone bursts • 4 scan modes and 5 programmable scan banks • MARS/CAP capability • Auto-dial memories • Auto high temperature protection feature • SMA connector • Wire cloning capable • Accepts up to 13.8V DC input • 4.5" h x 2.25" w x 1.75" d, 13 oz..... **\$209.99**

**Available Accessories**

EBP46N 9.6V 600mAh 5W NiCad battery, EDC16B Cigarette lighter cable with filter, EDC36 Angle plug power cable with filter, EDC37 13.8V power cable, EDC43 Cigarette lighter cable, EDC91 Quick charger, EDH29 Dry cell battery case, EME12 Headset/earphone/microphone with VOX, EME13 Headset/earbud/microphone with VOX, EME15 Earphone/microphone with VOX, EME17 Boom earphone microphone, EME20 Tie-pin mic/earphone, EME6 Earphone, EMS47 Speaker mic with volume control, EMS8Z Remote speaker mic, ESC35 Soft case for EBP46N/46N



**DJ-C5T** Credit Card Sized 2M/440MHz Dual Band HT 300mw output • TX: 144-147.995 & 420-449.995MHz • RX: 118-173.995 and 420-449.995MHz • 50 memories • CTCSS tone enc/dec standard • Volume/squelch control • Keylock • Auto power off with Morse Code alert • Mic/earphone jack • TX lamp • Free offset • Reverse monitor • Scan function with skip setting • Multi Euro tone bursts • Battery save & channel display modes • AM aircraft receive with expanded VHF wideband reception • Rechargeable 3.8V lithium-ion battery • 2-hour "snap-in" charger • Soft case • 3.75" h x 2.25" w x 0.43" d, 3 oz..... **\$149.99**

**Available Accessories**

EDC16B Cigarette light cable with filter, EDC36 Angle plug power cable with filter, EDS7 Microphone adapter, EME17 Boom earphone microphone, EME18 Earphone, EME20 Tie-pin mic/earphone, EMS49 Mini lapel speaker microphone, EMS50 Speaker microphone, ESC34 Soft case with belt clip



**IC-2GXA/HP** 2M Transceiver 7W output @ 13.5 V DC • 144-148MHz rx (136-174MHz expandable) • 40 mem. channels • 700mAh battery • Auto repeater operation • Tone scan • DTMF redial and five auto dial memories • 350 mW audio • Selectable DTMF speed • Built-in PL enc/dec • 35mA current drain • 2.2" w x 4.9" h x 1.4" d, 12.9 oz..... **Closeout \$249.99**

**Available Accessories**

AD25 Battery charger adapter, AD28 Battery pack adapter/rapid charger, BC105A Wall charger, BC119N1 NiCad/NiMH desk charger, BP130A Battery case, BP157A 900mAh 7.2V battery, BP174 600mAh 12V battery, HM128 Earphone + mic, HM46 Slim-line speaker mic, HM46L Slim-line speaker mic with right angle plug, HM54 Heavy-duty speaker mic, HS51 Headset/VOX, HS94 Earpiece headset, MB30 Mobile or wall bracket, OPC288 Mini DC power cord, SP13 Earphone, VS1 VOX-PTT unit for HS94

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Alinco Delivers Xtreme Performance and Value.

# Xtreme Xcitement!

## DJ-V5TH, 2m/440 HT\*

Great 2m/440 TX & RX, xtended RX range from 76 ~ 999 MHz, wide band FM, alpha display, 200 memories, CTCSS & DCS encode+decode, 5 watts output, compact size, 4 scan modes, split-band ops, auto-dialer, 13.8 VDC direct input. **Xcellent performer!**

## DJ-196T (2m), DJ-296T (222 MHz), DJ-496T (440 MHz) HT

Backlit keys, alpha display, 40 memories, CTCSS and DCS encode+decode, autodial, 13.8 VDC input, and more! High-power battery is standard. **Xtra handy!**

## DJ-S40T 440 MHz HT

Pocket HT features 500 mw output on AA cells, up to 1 watt using optional battery pack or external DC power. 100 memories, CTCSS encode+decode, SMA antenna, great audio, theft alarm and more! **Xtremely small but packs a punch.**

## DJ-S11T (2m),

**"Pager size" transceiver**, 340 mw output, great TX and RX audio. Self-storing pivot antenna, uses AA batteries, 21 memories, CTCSS encode, fits in pocket or purse. **Amazing low price and check out the array of Xcessories!**

## DJ-C5T 2m+440 "Credit Card" FM HT

**Awesome "credit card" size**, internal speaker, 50 memories, CTCSS encode+decode, AM airband RX, 300 mw output, soft case, 600 mAh lithium ion battery, includes rapid charger! **This tiny performer Xcells.**

## DR-605TQ 2m+440 FM Mobile/Base

**Xtra value!** 50 watts VHF/35 watts UHF, 51 memories/band, crossband repeat, 430 ~ 449.995 range allows for satellite comms, dual watch. **Check the LOW price!**

## DR-135T/TP MKII (2m), DR-435T MKII (440 MHz), DR-235T (222 MHz) Mobile/Base

DR-135 includes AM Airband RX. All models have 100 memories, ignition key on/off, theft alarm, large 7 character alpha display, optional internal TNC can be used for packet or APRS™, 9600 packet mode, front data/GPS input, rear DSUB9 connector, H/M/L power out, autodialer, CTCSS and DCS encode+decode, backlit mic, **Xtra rugged!** Accepts optional digital voice communications board.

## DJ-596T MKII 2m+440 HT

100 memories, alpha channel labels, NiMH battery, CTCSS and DCS encode+decode, WFM+NFM, theft alarm, 6 ~ 16 VDC input, illuminated keys and display, autodialer, full coverage of both bands, Xpanded receive; optional digital voice communications board and more! **Xtend your abilities!**

## DR-620T 2m+440 Mobile/Base

**Xceptional features!** Removable head, speaker faces up or down, changeable color alpha display, 200 memories, H/M/L output, V/U, V/V, U/U, WFM and AM Air Xtended RX, TCXO, theft alarm, **options include TNC or digital voice module, remote mount kit.**

## DR-MO6TH 6m/20 watts FM Mobile/Base

**"Magic band" Xcitement** with local and DX FM contacts, simplex or through repeaters. **Includes CTCSS encode and 100 memories.**

## DX-70TH (100w) HF+6m Mobile/Base/Portable

HF + 6m Amateur band TX in all modes, Xtra coverage RX from 150 KHz ~ 30 MHz and 50 ~ 54 MHz. Removable face, 2 VFOs, 100 memories, speech compressor, SSB, CW and AM narrow filters, fullbreak-in, multi-function control and MUCH more! **Xcessories include EDX-2 wire antenna tuner & DM-330MVT power supply.**

## DX-77T HF Base/Portable

**Xcellence at a great price!** Amateur band TX in all modes; 500 KHz ~ 30 MHz general coverage RX. Clean, clear audio, low noise floor from DDS, 100 memories, easy to operate. **Speech compressor, CTCSS encode for 10m FM operation, CW filter.**

www.ALINCO.com

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**IC-T22A** 2M Handheld 5W output @ 13.5 V • 4.0 - 16 VDC input • 136-174MHz rx • Auto low power/power saver (15mA drain) • Remote control microphone (optional HM-75A) • 80 memory channels (40 with alpha display) • VHF/UHF air band receive • Auto repeater function • Backlit display • Die cast aluminum frame and heat sink • Optional tone scan • 2.3" w x 4.3" h x 1.1" d, 10.9 oz. .... **\$199.99**

#### Available Accessories

AD56 Battery pack adapter/rapid charger, BC119N11 NiCad/NiMH desk charger, BP170 Battery case, BP172 950 mAh 4.8V battery, BP173 600mAh 9.6V battery, BP180 600mAh 7.2V battery, CP12 Cigarette cable with filter, CP12L Right angle cigarette cable with filter, HM128 Earphone + mic, HM131 Speaker/mic/earphone jack/clip, HM46 Slim-line speaker mic, HM46L Slim-line speaker mic with right angle plug, HM54 Heavy-duty speaker mic, HM75A Remote control mic, HS10 Boom mic/headset, HS105A VOX unit, HS105B PTT switchbox, HS85 Headset with VOX, HS94 Earpiece headset, LC125 Case for T22A with BP170/171/172, LC126 Case for T22A with BP173, MB30 Mobile or wall bracket, NCPI Nylon chest pack, OPC254 Mini DC power cable, OPC254L Right angle mini DC power cable, SP13 Earphone, VS1 VOX-PTT unit for HS94

**IC-T2H SPORT** 2M Handheld 6W @ 9.6 VDC • 136-174MHz receive • 43 memories • CTCSS enc/dec standard, with pocket beep and tone scan • 8 programmable keys • 5 DTMF memories, with 32-digit codes and redial • 10 weather channels • Direct keypad frequency entry • Backlit LCD • Auto repeater and "intuitive" help functions (display directs user what to do next) • 2-step power save • Monitor and lock functions • One-piece, die-cast aluminum chassis and polycarbonate casing • Meets MIL SPEC C/DE for shock and vibration • Includes battery holder • Alkalines required • 2.3" w x 5.5" h x 1.3" d, 14.8 oz. .... **\$99.99**

#### Available Accessories

AD81 Adapter for BC11911, BC110A Wall charger, BC119N01 Desk charger, BC122A AC adapter for BC133, BC133 Drop-in trickle charger, BP194 "AA" alkaline battery case, BP195 700mAh 9.6V battery, BP196 1050mAh 9.6V battery, CP12L Right angle cigarette cable with filter, CP17L Right angle cigarette cable for charger, CS22 DOS programming software, CSWH44 Windows software with cable, HM128 Earphone + mic, HM131 Speaker/mic/earphone jack/clip, HM46 Slim-line speaker mic, HM54 Heavy-duty speaker mic, HM75A Remote control mic, HS51 Headset/VOX, HS94 Earpiece headset/use with VS1L, LCF35WIVEL Leather case with swivel, LC145 Carrying case, MB68 Extra standard belt clip, MB74 Spring loaded belt clip, MB87 Swivel belt clip, OPC474 Radio-to-radio clone cable, OPC478 PC cable, OPC478U PC USB cable, OPC515L Right angle DC power cable for charger, SP13 Earphone, VS1 VOX-PTT unit for HS94

With the IC-T2H SPORT and a PC you can download up to 40, stored, pre-programmed frequencies, such as in a repeater directory, from your PC directly into the SPORT. PC-to-SPORT and SPORT-to-SPORT cloning requires optional software and cables.



**IC-V8** 2M FM HT ICOM's first amateur 2m handheld radio with CTCSS/DTCS enc/decode with tone scan. You will not find a 2M HT that is easier to use. • Retro design • 144-148MHz • Full 5.5W output (standard battery) • Acoustical design for the best audio • 100 alphanumeric memories with easy recall • Scans 40 channels/second • Zoom through personalized scan ranges • Customize operation using up/down and rotary controls • Designed for any size hand with full-sized keypad for larger fingers • Drop-in trickle charger included, which operates from

12VDC either in home or car; charge battery in radio or alone • Use a PC to set-up operating parameters • Durable green polycarbonate front panel and aluminum diecast chassis built to military specs • 2.125" w x 5.188" h x 1.375" d, 12.3 oz. .... **\$129.99**

#### Available Accessories

AD101 Battery adapter for BP211 and BC119N01, AD9411 Adapter cup for BC119N01, BC119N01 Desk charger, BC14401 Desk charger with adapter, BP208 Battery case, BP209 7.2V 1100mAh 5.5W battery, BP210 7.2V 1650mAh 5.5W battery, BP211 7.4V 1600mAh Lith ion battery, BP222 7.2V 600mAh 5.5W battery, CP17L Right angle cigarette cable for charger, CSV8 Cloning software, HM131L Right angle plug for speaker/microphone/earjack/clip, HM46L Slim-line speaker mic with right angle plug, HM54 Heavy-duty speaker mic, HM75A Remote control mic, HS51 Headset/VOX, HS94 Earpiece headset, LCF35WIVEL Leather case with swivel, MB68 Extra standard belt clip, MB74 Spring loaded belt clip, MB87 Swivel belt clip, OPC474 Radio-to-radio clone cable, OPC478 PC cable, OPC478U PC USB cable, OPC515L Right angle DC power cable for charger, SP13 Earphone, UT108 DTMF decode unit, VS1L Right angle VOX-PTT unit for HS94

## DUAL BAND HANDHELDS

**IC-Q7ABC** Ultra Compact 2M/440MHz Dual Band HT with Full Feature Scanner Extra easy to use and wide FM performance • Output power: 350mW (VHF), 300mW (UHF) • Transmit: 144-148MHz and 440-450MHz triple conversion • Receive: 30-1300MHz (cell blocked on U.S. model) • 200 memories • Superior

audio in its class from large 1.4" speaker and 100mW audio output • CTCSS tone encoder/decoder with pocket beep • Easy to use - only 7 buttons (including power) and a large, easy to grasp tuning dial • Auto repeater function • Channel operation • Tone scan • 10 tuning steps • Easy reverse • Dual watch • RIT function • Auto power OFF power saver • Manually or automatically controlled LCD back lighting for easy low light operation • Meets MILSPEC C/D/E for shock and vibration • Includes 2 AA-size NiCads, or "AA" alkalines • 2.3" w x 3.75" h x 1.1" d, 6 oz. .... **\$119.99**

#### Available Accessories

AD925MA SMA-BNC adapter, BC127A Charger for 2 or 4 "AA" NiCads, HM128 Earphone + mic, HM46 Slim-line speaker mic, HS85 Headset with VOX, LC146 Carrying case, LC146A Carrying case, OPC782 Plug adapter cable, SP13 Earphone

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**



**IC-T7H** 2M/440MHz Dual Band HT 5W with standard battery (9.6V/650mAh) • Up to 6W @ 13.5V DC (optional DC power cable required) • TX 144-148 MHz, 440-450MHz; RX 118-174 MHz, 400-470MHz • 250mW audio output • One-touch band switching • Priority watch • 70 memories (9 DTMF, for auto dialing) • CTCSS tone encode/decode • 50 independently programmable tone frequencies • Auto power save and repeater function • Auto OFF • Thumb-touch lock settings • Internal

guide • Backlit LCD • Wall charger • Programmable • 2.3" w x 4.8" h x 1.1" d, 14.3 oz. .... **\$189.99**

#### Available Accessories

AD56 Battery pack adapter/rapid charger, BC119N11 NiCad/NiMH desk charger, BP170 Battery case, BP172 950mAh 4.8V battery, BP173 600mAh 9.6V battery, BP180 600mAh 7.2V battery, CP12 Cigarette cable with filter, CP12L Right angle cigarette cable with filter, CS72 DOS programming software, CSWH44 Windows software with cable, FA1443B 2M/440 dck, HM128 Earphone + mic, HM131 Speaker/mic/earphone jack/clip, HM46 Slim-line speaker mic, HM54 Heavy-duty speaker mic, HM75A Remote control mic, HS10 Boom mic/headset, HS105A VOX unit, HS105B PTT switchbox, HS85 Headset with VOX, HS94 Earpiece headset, LC136 Case for T7H with BP170/171/172, LC137 Case for T7H with BP173/180, MB30 Mobile or wall bracket, NCPI Nylon chest pack, OPC254 Mini DC power cable, OPC254L Right angle mini DC power cable, OPC478 PC cable, SP13 Earphone, VS1 VOX-PTT unit for HS94

**IC-W32A** 2M/440MHz Dual Band HT 5W output @ 13.5V DC • 144-148, 440-450 transmit; 118-174, 400-470 receive • 200 memories • 8-character alphanumeric memory identification • Keypad entry • Backlit display and keypad • HT-to-HT cloning capability or PC programming capability (optional accessories required) • Independent tuning and volume band controls • VHF/UHF exchange function allows assignment of VHF/UHF band controls to either knob • Meets MILSPEC C/D/E for shock and vibration • 2.25" w x 5.5" h x 1.4" d, 16 oz. .... **\$259.99**

#### Available Accessories

AD51 Battery pack adapter/rapid charger, BC119N11 NiCad/NiMH desk charger, BP170 Battery case, BP172 950mAh 4.8V battery, BP173 600mAh 9.6V battery, BP180 600mAh 7.2V battery, CP12 Cigarette cable with filter, CP12L Right angle cigarette cable with filter, CSWH44 Windows software with cable, CSW32 DOS programming software, FA1443B 2M/440 dck, HM128 Earphone + mic, HM131 Speaker/mic/earphone jack/clip, HM46 Slim-line speaker mic, HM54 Heavy-duty speaker mic, HM75A Remote control mic, HS10 Boom mic/headset, HS105A VOX unit, HS105B PTT switchbox, HS85 Headset with VOX, HS94 Earpiece headset, LC128 Carrying case, MB30 Mobile or wall brkt, NCPI Nylon chest pack, OPC254 Mini DC power cable, OPC254L Right angle mini DC power cable, OPC474 Radio-to-radio clone cable, OPC478 PC cable, SP13 Earphone, VS1 VOX-PTT unit for HS94



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# ICOM

## MULTI BAND HANDHELDS

**IC-T90A** 6M/2M/70cm FM Handheld Palm-sized, simple to operate, and designed with a die-cast aluminum chassis. New MOSFET technology, along with a 7.4V Lithium-ion battery, produces a full 5W. Wideband receive covers 495 kHz to 999.990MHz (cellular blocked), AM, FM or WFM modes. Unique WX Alert feature constantly checks local active weather station for alert tone. If alert occurs, the HT automatically switches to the WX channel and beeps. Scanning management with 555 alphanumeric memories (500 regular, 50 scan edges, and 5 call channels). Dynamic Memory Scan allows choosing any of 450 memories to scan, and, with its soft partitioning, setting up a maximum of 18 banks or 100 channels/ bank. Pre-programmed with TV station frequencies! Over-sized buttons for easy operation. Optional PC software for memory, alphanumeric, scan list and parameter customizing. • 2.28" w x 3.44" h x 1.16" d, 8.47 oz. .... **\$269.99**

### Available Accessories

AD925MA SMA - BNC adapter, BC139 Desk rapid charger, BP216 Battery case, BP217 7.4V 1300mAh lith-ion, CP19R Cigarette cable with filter, CST90A Windows cloning software, HM128 Earphone + mic, HM131 Speaker/mic/earphone jack/clip, HM46 Slim-line speaker mic, HM75A Remote control mic, HS85 Headset with VOX, HS94 Earpiece headset, LC152A Carry case, MB83 Swivel belt clip, OPC474 Radio-to-radio clone cable, OPC478 PC cable, OPC478U PC USB cable, SP13 Earphone, VS1 VOX-PTT unit for HS94

# KENWOOD

## SINGLE BAND HANDHELD

**TH-22AT** 2M FM Handheld This is a super-compact and lightweight transceiver with impressive performance. EZ to use menu system. Palm-sized, sharply styled, easily slips into pocket. • 5W output from MOS FET power module and standard PB-34 NiCad battery • 136-174 receive • RF output control (Hi/Low/EL) • 144-148 MHz coverage • 40 memory channels stored in EPROM (plus 1 call channel) • Auto repeater offset • Multi scan functions (VFO, call and memory) • Dual Scan stop modes (CO and TO) • CTCSS encode • DTSS and page • Luminescent keypad and LCD with backlighting • Built-in DTMF keyboard • 5 DTMF memories • Tone alert • Selectable squelch configuration • Busy channel lock out • Battery voltage indicator • Drop-in desktop charger • 2.1" w x 6.1" h x 1.12" d, 11 oz. .... **Closeout \$199.99**

### Available Accessories

BT9 Four "AA" battery holder, EMC3 Label clip mic/earphone PC, HMC3 VOX/boom mic headset, KSC14 2 pack rapid charger, KSC8A Drop-in charger, PB33 1200mAh 6V battery, PB34 600mAh 9.6V 5W battery, PG2W DC cable, PG3J Cigarette cord with filter, SMC32 Mini right angle speaker mic, SMC33 Speaker mic with remote control, SMC34 Speaker mic with volume function keys, TSU8 CTCSS decoder, WR2 Water resistant bag

**TH-K2AT** 2M HT • 5W RF output • Large LCD panel and backlit keys • Internal VOX • Weather alert/RX • Automatic simplex checker • Auto repeater offset • Multiple scanning functions • Priority scan • Built-in CTCSS, DCS and 1750Hz tone burst • Meets MIL-STD-810 standards for resistance to rain, vibration, shock and humidity • Charges up to three times faster than previous models..... **\$159.99**

### Available Accessories

BT14 Six "AA" battery holder, EMC3 Lapel clip mic/earphone PC, HMC3 VOX/boom mic headset, KHS21 Boom mic headset, KSC24 Rapid charger, PB43N 1100mAh 7.2V NiMH battery, PG2W DC cable, PG3J Cigarette cord with filter, PG4Y Programming cable, SC45 Soft case, SMC32 Mini right angle speaker mic, SMC33 Speaker mic with remote control, SMC34 Speaker mic with volume function keys, WR2 Water resistant bag



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**FREE ITEMS included with some radios.**  
**See Price Guide for details.**

## DUAL BAND HANDHELDS

**TH-D7A(G)** 2M/440MHz Dual Band Data Communicator Equipped with a built-in TNC for simple packet operation or with a GPS as a full function APRS. Reports position, speed and heading as well as calculation of distance to destination. Also use for APRS" messaging - send up to 45 characters without a PC. Advanced functions possible with the VC-H1 • 5.5W @ 13.6V DC • 2M: 144-148MHz tx, 118-174MHz rx • 440MHz: 430-450MHz tx, 400-480MHz rx • 1200/9600 baud TNC • Station list stores data in up to 40 memory channels • Grid square locator display • Dual receive on same band for voice and data (VHF only) • 200 memories • PC programmable for frequency and name (PG-4W required) • 16 backlit keys • CTCSS encode/decode • MIL-SPEC 810C/D/E water resistant • 10 channel DTMF phone and auto patch memories • TM-V7A and TM-742D DTMF remote • Altitude • Time • 3-position memory • 3-memory text • Position ambiguity • Audible emergency signal • Auto message response • Data band settings • 1750MHz packet burst • 4.75" h x 2.25" w x 1.5" d, 12 oz .... **\$359.99**

### Available Accessories

BC19 Rapid charger, BT11 Four "AA" battery holder, EMC3 Lapel clip mic/earphone PC, HMC3 VOX/boom mic headset, J29063113 Belt clip, PB39 600mAh 9.6V 5W battery, PG2W DC cable, PG3J Cigarette cord with filter, PG4P PC control cable, PG4V VCH1 connector cable, PG4W PC software and cable, SC47B Black soft case, SC47OR Orange soft case, SMC32 Mini right angle speaker mic, SMC33 Speaker mic with remote control, SMC34 Speaker mic with volume function keys, WR2 Water resistant bag

**TH-G71A** Dual Band FM HT Its ergonomic design, illuminated and back lit display all combine to make operation a breeze. The EZ to use menu system gives full control over all operating settings. • 6W (VHF), 5.5W (UHF) @ 13.8V DC • 2M: 144-148 tx/rx and 118-174MHz extended receive including Aircraft, 440MHz: 430-450MHz tx and 400-470 MHz rx • 200 multi-function memory channels • Memory name function • Multiple scan modes • CTCSS tone scan • DTMF memory (10 channels) • DTMF remote control • Function key lock • Auto battery saver circuit • Auto power-off • Time-out timer • PC ready • High performance antenna • TM-V7A remote control • MIL-STD 810E approved • 2.3" w x 4.4" h x 1.3" d, 11.6 oz. .... **\$229.99**

### Available Accessories

BC19 Rapid charger, BT11 Four "AA" battery holder, EMC3 Lapel clip mic/earphone PC, HMC3 VOX/boom mic headset, J29063113 Belt clip, PB39 600mAh 9.6V 5W battery, PG2W DC cable, PG3J Cigarette cord with filter, PG4P PC control cable, SC45 Soft case for G71A with PB38/39, SMC32 Mini right angle speaker mic, SMC33 Speaker mic with remote control, SMC34 Speaker mic with volume function keys, WR2 Water resistant bag

## TRIBAND HANDHELD

**TH-F6A** FM Triband HT Covers 144/220 and 440MHz plus 0.1-1300 cell blocked (including Aircraft receive). • Dual channel receive capability • FM/FM-W/FM-N/AM plus SSB/CW receive • Ferrite bar antenna for receiving AM • Weather channel RX mode • 435 memories (8 groups of 50 channels) • 3 call channels plus 20 for programmable scan • Multiple scan functions • 7.4V 1550 mAh lithium-ion battery for 5W and extended operation • 16-key backlit pad plus multi-scroll key • Built-in charging circuitry - battery recharges while unit operates from a DC supply • Built-in CTCSS enc/decode/DCS • Large 8-character alphanumeric display • Wireless remote control • Battery indicator • Internal VOX • MCP programming software via web (using PG-4P) • Meets MIL-STD 810 C/D/E for resistance to vibration, shock and light rain • 3.48" h x 2.31" w x 1.18" d, 8.8 oz (with battery) ..... **\$329.99**

**Available Accessories**  
BT13 AA battery case, EMC3 Lapel clip mic/earphone PC, HMC3 VOX/boom mic headset, KHS21 Boom mic headset, PB42L 1550mAh 7.4V lith-ion battery, PG2W DC cable, PG3J Cigarette cord with filter, PG4P PC control cable, SC51 Softcase with swivel belt clip, SMC32 Mini right angle speaker mic, SMC33 Spkr mic with remote control, SMC34 Spkr mic with volume function keys, WR2 Water resistant bag

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# AES

**RADIOS**

**49**



## SINGLE BAND HTS

**VX-150** 2M Ultra-Rugged FM HT Designed to perform under the most difficult conditions. Packed with leading edge features. Die-cast aluminum case • High output speaker • Illuminated keypad and OmniGlow™ • 5W with standard battery • Three power output levels • 144-148 MHz tx, 140-174MHz rx • 209 memories • Smart-Search™ auto memory loading • Keypad with 16 multi-function keys • Two user-definable function keys • Priority monitoring • Dual watch • Alphanumeric recall • Memory bank and preferential memory scanning • VFO search • Auto repeater shift • ARTS™ • Wide and narrow deviation selection • 1750Hz tone calling • Pro-programmable menu • Battery saver and auto power off • MIL-STD 810D/E rating • 4.2" h x 2.3" w x 1.1" d, 11.5 oz. **\$119.99**

### Available Accessories

ADMS1F Programming software, CN3 BNC-SMA adapter, CT27 Cloning cable, CT44 2-pin speaker mic adapter, CT53 Packet cable, EDC5B DC adapter/filter, EDC6 DC adapter; plug/wire only, FBA25 6 "AA" cell battery case, FNBV57 7.2V 1100mAh battery, FNB64 7.2V 700mAh battery, LCC150/TT Leather case, LCC150S/TT Leather case/swivel, MH34B4B Speaker mic, MH37A4B Earpiece and mic, NC72B Extra wall charger, VAC400B One-hour rapid charger, VC25 VOX headset

## DUAL BAND HANDHELDS

**FT-50RD/41B** Ultra Compact Dual Band VHF/UHF HT High performance, heavy-duty, rugged, state-of-the-art and small enough to put in a pocket. Simple to operate, with all the features you want. • Power output 5/2.8/ 1.0/1W • Transmit: 144-148MHz and 430-450MHz • RX: 76-200, 300-540, 590-999MHz (cell blocked), includes AM aircraft receive, FM narrow and wide • 3 selectable filters • Digital Code Squelch • CTCSS encode/decode • 112 memories plus 2 home channels • High speed scanning • 48-character alphanumeric display • ARTS™ • Dual watch • Digital voice recorder • Windows™ PC programmable • Rear mount battery • MIL-STD 810D/E rating • 3.9" h x 2.25" w x 1.2" d, 11.5 oz. **\$219.99**

### Available Accessories

ADMS1E Software, CA14 Two charging sleeves, CA15 Charging stand for NC60B, CLIP10 Spring loaded belt clip, CN3 BNC-SMA adapter, CSCV10 Cordura case, CSC6B Case for unit with FNB41/FBA15, CSC69 Case for unit with FNB40, CT27 Cloning cable/CT27A, CT53 Packet cable, EDC5B DC adapter/filter, EDC6 DC adapter; plug/wire only, FBA15 4 "AA" battery holder, FBA21 6 "AA" battery holder, FEP10 Earphone, FNBV47 7.2V 1100mAh battery with belt clip, FNB41 9.6V 600mAh SW battery, FNB42 9.6V 1100mAh SW battery, LCC10C Leather case with clip for unit with FNB41/V47, LCC10S Leather case with sleeve for unit with FNB41/V47, MH30C2B Speaker mic, MH34B4B Speaker mic, MH37A4B Earpiece and mic, NC50 One-hour dual slot charger, NC60B Wall charger, PA17 Battery cable extender, VC25 VOX headset



mW with standard 3.6V lithium-ion battery (1W at 6V DC) • 291 memory channels • SmartSearch™ • CTCSS enc/decode, digital coded squelch • Backlit keypad • ARTS™ • One-touch emergency system • PC programmable • 6-digit alphanumeric memory labels • 3.2" h x 1.9" w x 1" d, 4 oz **C/O \$139.99**

### Available Accessories

ADMS1E Windows software, CN3 BNC-SMA adapter, CSC71 Soft case, CT44 2-pin speaker mic adapter, CT53 Packet cable, EDC15 DC adapter, FBA20 Battery holder, FEP10 Earphone, FNB52LI 3.6V 700mAh lithium-ion battery, MH34B4B Speaker mic, MH37A4B Earpiece and microphone, NC66B Two-hour charger, VC25 VOX headset



**VX-2R** Ultra-compact 144/430MHz Dualband FM Handheld Transceiver Slightly smaller in total size than the 1R, the 2R is housed in a rugged aluminum die-cast case. Powered by a slim-line 1 amp-hour Li-ion battery pack, yielding 1.5W output power on 2M, and 1W on 70cm. With external DC power applied via the optional adapter, power increases to 3/2W (2M/70cm). The VX-2R includes wide receiver coverage from 500kHz to 999MHz (cellular blocked) on AM and FM modes. Over 1300 memory channels, special memory banks for shortwave broadcast, marine band, and NOAA weather ("Severe Weather Alert" feature included), CTCSS and DCS with "split tone" capability, a WIRES™ internet access key and DTMF auto-dialer. Outstanding audio. • Dual-channel "priority" operation • VOX (optional headset required) • RF squelch • Channel counter searches for frequency of strong nearby station • Automatic Repeater Shift • ARTS™ • Busy channel lock-out • DC voltage meter • Wide/narrow deviation setting • Cloning, for quick transfer of programming data • 1750Hz tone for European repeater access • 1.89" w x 3.19" h x 0.91" d, 4.7 oz • **\$20 Factory Rebate thru 12/31/03..... \$189.99**

### Available Accessories

CN3 BNC-SMA adapter, CSC90 Soft case, CT27 Cloning cable, CT44 2-pin speaker mic adapter, EDC21 DC adapter, FNB82LI 3.7V 1000mAh lithium-ion battery, MH34B4B Speaker mic, MH37A4B Earpiece and microphone, VC25 VOX headset

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**

## TRIBAND HANDHELDS

**VX-5R** Tri-Band HT A miniature FM transceiver with extensive frequency coverage of 2M, 6M, 440MHz (including AM and FM broadcast), HF shortwave up to 16MHz and VHF AM aircraft. Super thin profile and durable lightweight design. • 5W (4.5W 430MHz) with standard lithium-ion battery • 50-54, 144-148 and 430-450MHz tx, .5-15.995, 48-728.990 and 800-998.990



MHz wideband rx (cell blocked) • 220 memories plus home channels • 10 auto-scan weather channels • CTCSS enc/decode, DCS • Backlit keypad • ARTS™ • 8-character, alpha-numerics • Time-out timer • Dual watch • Dot matrix LCD • Smart search spectrum analyzer • Temperature display read-out • Barometric pressure sensor option • Automatic power-off • Win-dows PC programmable • 16-digit 9-memory DTMF autodialer • Busy channel lock out • Multi-section antenna • Aluminum diecast case • MIL-STD 810 rating • 3.4" h x 2.3" w x 1.1" d, 8.9 oz. **\$249.99**

**VX-5RS** Same radio as the VX-5R above with a silver case. **\$249.99**

### Available Accessories

ADMS1E Windows software, CD15A Charger stand for NC72B, CN3 BNC-SMA adapter, CSC73 Soft case, CT27 Cloning cable, CT44 2-pin speaker mic adapter, CT53 Packet cable, EDC5B DC adapter/filter, EDC6 DC adapter; plug/wire only, FBA23 2 "AA" cell battery case, FNB58LI 7.2V 1100mAh lithium-ion battery, MH34B4B Speaker mic, MH37A4B Earpiece and mic, NC72B Extra wall charger, SU1 Altitude/barometric pressure sensor, VC25 VOX headset

**VX-7R** Ultra-Rugged, Submersible Magnesium FM Triband HT With a full 5W output on 50, 144 and 430MHz FM, the 5R also offers bonus coverage on 222MHz FM band at 300mW. The rugged design allows the unit to be submersible at 3' for 1/2 an hour and it sports rubber bumpers, all for JIS-7 specification protection. • 500kHz to 999MHz continuous receive (cellular blocked)



• Four simultaneous dual receive modes • Over 900 memories including 40 memory scan band limit, 10 home channels and 10 weather • Built-in CTCSS/DCS enc/decode • "Split Tone" capability • Auto-Range Transponding System • Easy-to-read display with graphical and pictorial tools - user-changeable icons and fonts • Full-color strobe LED • Spectrum scope display • 24-hour clock • On/Off timers • Internet key for instant access to WIRES™ internet-linking • "Quick-Draw" swivel-mount belt clip • 7.4V 130mAh lithium-ion battery • Choose black or silver • 2.4" w x 3.5" h x 1.1" d, 9.2 oz. **\$329.99**

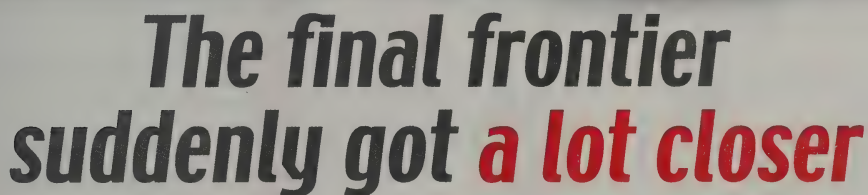
**VX-7RB** Same radio as the above VX-7R with a black case. **\$329.99**

### Available Accessories

ADMS1G Programming software, CD15A Rapid charger for NC72B, CMP460A Waterproof speaker/mic, CN3 BNC-SMA adapter, CSC88 Soft case, CT91 Microphone adapter, EDC5B DC adapter/filter, EDC6 DC adapter; plug/wire only, FBA23 2 "AA" cell battery case, FNB80LI 7.4V 1300mAh lithium-ion, MH57A4B Speaker/mic, NC72B Wall charger, SU1 Altitude/barometric pressure sensor, VC27 Earpiece/mic



## VHF/UHF ALL MODE SATELLITE TRANSCEIVER



100W VHF/75W UHF Variable Output • All Mode • Simultaneously Works Two Bands at Once • 9600 bps High Speed PACKET Port • 11  $\mu$ V Sensitivity • Main & Sub Band Functions for IF Shift, Sweep, NB, RF Attenuator • Large LCD Display • Four Versatile Scanning Functions • CTCSS Encode/Decode/Tone Scan • Built-in Keypad • PC Controllable • Memory Pad • Normal/Reverse Satellite Functions

Turns the IC-910H into an all mode, tri-band transceiver. Also makes crossband and full duplex operation possible.



ICOM®



Manufacturer:	Model	AD1	SD1	AD1	AD1	ALINCO	ALINCO	DI-296T	DI-496T	ALINCO	ALINCO	ALINCO	IC-263AT/HP	IC-12H SPORT	ICOM	ICOM
	AT-201HP	2 meters	440MHz	AT-401HP	PR-52	PR-222	DI-196T	DI-296T	DI-496T	DI-S11T	DI-S40T	IC-263AT/HP	IC-12H SPORT	ICOM	ICOM	IC-V8
	Band	130-179	420-470	40-54	220MHz	220MHz	220MHz	220MHz	440MHz	2 meters	440MHz	2 meters	2 meters	2 meters	2 meters	2 meters
	Rx Range (MHz)	No	No	40-54	135-174	215-228	135-174	222-225	430-450	144-148	425-450	144-148 <sup>(a)</sup>	136-174	136-174	136-174	136-174
	Aircraft Rx	No	No	5W	5W	5W	5W	No	No	No	No	No	No	No	No	No
	Power Output	5W	5W	5W	5W	5W	5W	5W	5W	340mW	500mW	7W	5W	5W <sup>(b)</sup>	5W	5.5W
	Touch-Tone Pad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>(c)</sup>
	Tone Decode	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>(d)</sup>	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes <sup>(e)</sup>
	Memories	40	40	40	40	40	40	Yes <sup>(f)</sup>	Yes <sup>(g)</sup>	No	Yes	43	40	Yes	Yes	Yes <sup>(h)</sup>
	Alphanumeric	No	No	No	Yes	Yes	Yes	Yes	Yes	21	100	43	40	80/40 <sup>(i)</sup>	100	100
	Battery Type	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Yes	Yes	AA	No	No	No	Yes	Yes	Yes
	PC Programmable	No	No	Yes	Yes	Yes	No	No	Ni-Cad	AA	AA	Ni-Cad	Ni-Cad <sup>(k)</sup>	Ni-Cad	Ni-Cad	Ni-Cad
	Antenna Conn	BNC	BNC	TNC <sup>(j)</sup>	BNC	BNC	BNC	BNC	BNC	No	No	BNC	BNC	BNC	BNC	Yes
	Size (l/w/d, in.)	3.3/2/1.2	3.3/2/1.2	4.5/2/1.6	4.5/2/1.6	4.5/2/1.6	4.9/2/1.6	4.9/2/1.6	4.9/2/1.6	3.9/2/1.2	4.0/2/1.2	4.9/2/1.4	4.5/2/1.3	4.8/2/1.1	4.8/2/1.1	5.2/1/1.4
	Weight (oz.)	6.6	6.6	14.5	14.5	14.5	13.2	13.2	13.2	2.72	3.5	12.9	14.8	10.9	10.9	12.3

\*Only alkaline case included

(1) TNC ant. jack commonly found on cell & commercial equin

(4) Standard CTCSS plus DCS

(6) Guaranteed 440-450MHz only

(7) Folding ant attached 2m ant - telescopic 70cm flow

(8) Expandable to 136 17A

(10) expandable to 136-1/4

(g) With external 12.0V

(5) With external 13.8

13) Dual operation between Voice & Data

13) Dual operation between voice & data

(14) IW with wall cube or cig-  
all radices are cell flatted

**All radios are cell blocked**

**FREE ITEMS included with some radios.**

**See Price Guide for details.**

Manufacturer	KENWOOD	KENWOOD	YAESU
Model	TH-22ATH	TH-42AT	VX-150
Band	136-174	2 meters	2 meters
Rx Range (MHz)	136-174	136-174	140-174
Aircraft Rx	No	No	No
Power Output	5W	5W	5W
Touch-Tone Pad	Yes	Yes	Yes
Tone Encode	Yes	Yes	Yes
Tone Decode	TSU-8	DCS	Yes
Memories	41	TBA	200
Alphanumeric	No	Yes	Yes
Battery Type	No-Cad	No-Cad	No-Cad
PC Programmable	No	TBA	Yes
Antenna Conn	BNC	TBA	SMA
Size (h/w/d, in.)	4.6/2.7/1.0	TBA	4.3/2.3/1.0
Weight (lb/oz.)	10.2	TBA	11.1.5

MULTI BAND HANDHELDS																			
Manufacturer	ALINCO	ALINCO	ALINCO	ICOM	ICOM	ICOM	ICOM	ICOM	ICOM	KENWOOD	KENWOOD	KENWOOD	KENWOOD	YAESU	YAESU	YAESU	YAESU	YAESU	YAESU
Model	DI-586T DI-586TKII	DI-586T DI-586TKII	DI-V5TH	IC-Q7ABC	IC-Q7ABC	IC-17H	IC-190A	IC-323A	TH-D7A(G)	KENWOOD	TH-F6A	TH-G7IA	FT-50RD/41B	VX-1R	VX-2R	VX-5R VX-5RS	VX-7R VX-7RB		
Tx Range (MHz)	144-148 420-450	144-148 420-450	144-148 438-450	144-148 440-450	144-148 440-450	144-148 430-450	144-148 430-450	144-148 430-450	144-148 430-450	144-148 430-450	144-148 222-225 430-450	144-148 430-450	144-148 430-450	144-148 430-450	144-148 430-450	144-148 430-450	50-54, 144-148 222-225 430-450		
Rx Range (MHz)	136-174 400-512	118-174 420-450	76-999 420-450	30-1300	118-174 400-470	118-174 400-470	495-999/99	118-174 400-470	118-174 400-480	118-174 400-480	118-174 400-470	118-174 400-470	76-200 300-540 590-999	5-1.7 76-999	5-1000	0.5-16 48-729 800-999	5-16 48-729 800-900		
Single/Multi Rxtx	Single	Single	Single	Single	Single	Single	Single	Dual	Single <sup>10</sup>	Dual	Single	Single	Single	Single	Single	Single	Dual		
Aircraft Rx	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Power Output	5W	300mW	5W	350mW	5W	6W	5W	5W	5W	5W	5W	5W	5W	500mW <sup>10</sup>	1.5W (1W/70cm)	5W	5W	5W (300mW/222)	
Memories	100	50	200	200	200	70	555	200	200	435	200	200	112	291	1300+	220	220		
CTCSS	Enc/Dec/DCS	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec	Enc/Dec/DCS	Enc/Dec	Enc/Dec	Enc/Dec/DCS	Enc/Dec	Enc/Dec	Enc/Dec/DCS	Enc/Dec/DCS	Enc/Dec/DCS	Enc/Dec/DCS	Enc/Dec/DCS		
TTP	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes		
Alphanumeric	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
PC Programmable	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Eventually	Yes	Yes		
Battery Type	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Ni-Cad	Li-Ion	Ni-Cad	Ni-Cad	Li-Ion	Li-Ion	Ni-Cad	Ni-Cad	Li-Ion	Li-Ion	Li-Ion	Li-Ion		
Ant Connector	BNC	Fixed	SMA	SMA	SMA	BNC	SMA	BNC	SMA	SMA	SMA	SMA	SMA	SMA	SMA	SMA	SMA		
Size (h/w/d, in.)	4.9/2.1/1.6	3.8/2.2/0.4	3.8/2.3/1.3	3.8/2.3/1.1	3.8/2.3/1.1	4.8/2.3/1.1	3.4/2.3/1.2	5.5/3.3/1.4	4.7/2.1/1.7	3.4/2.3/1.2	4.4/2.1/1.3	3.9/2.3/1.2	3.9/2.3/1.2	3.2/1.9/1.0	3.2/1.9/0.9	4.1/2.4/1.3	3.5/2.3/1.1		
Weight (oz.)	13.2	3.2	12	6.4	6.4	14.3	8.5	16	13.4	8.8	11.5	11.6	11.5	4	4.7	10	19.6		



# Heard it. Worked it. Logged it!



**IC-756PROII**



**IC-746PRO**

Icom's PRO series makes the difference between a successful QSO and a lost opportunity. Let the power of 32 Bit DSP show you how to pull signals out of the dirt that old analog rigs can't. There's a reason the world's best DX'ers use Icom. Find out at AES.

- 32 Bit Floating Point IF DSP & 24 Bit AD/DA Converter
- Selectable Digital IF Filter Shapes For SSB & CW
- Improved 3rd Order Intercept Point
- All Mode
- CW Memory Keyer
- VOX
- Auto Antenna Tuner
- AGC Loop Management
- Auto & Manual Notch
- Digital Twin Passband Tuning
- Built-in RTTY Demodulator & Decoder
- And More

**IC-756PROII ADDITIONAL FEATURES** • 5" TFT Color Display • Separate RX Only Antenna Jack • Transverter I/O Port • Live Band Scope • Digital & Analog Meter • Dual Receive • Digital Voice Recorder

**IC-746PRO ADDITIONAL FEATURES** • LCD Display • 9600 Baud Packet Capable • Digital Meter • RX Audio Equalizer • SWR Analyzer • Sweeping Scope

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**ICOM**





## HF RADIOS

**DX-70TH** Compact HF Covers 160-6M • 150kHz-30MHz and 50-54MHz receive • SSB, CW, AM, FM • 100W (AM 40W) • Detachable face • 100 multi-function memories • Two VFOs • Easy split operation mode • Multi-function control • Narrow filter • Noise blanker • Speech processor • CTCSS for 10M and 6M repeaters • Full, semi or auto break-in CW • All mode squelch • General coverage receiver • Quick offset • Two scan modes • Separate antenna terminals for HF and 6M • RIT • TXIT • Selectable AGC • RF gain control • Dial lock • Automatic antenna tuner interface • MARS/CAP capability • 2.25" h x 7" w x 9" d, 8.3 lbs. .... **\$699.99**

### Available Accessories

DM330MVT 30 amp switching power supply with meter, EBC8 Front control head bracket, EBC9 Extra mobile bracket, ED54 5' remote mount accessory cable kit, ED55 5' mic extension cable, ED56 15' remote cable, EDX2 160-10M auto wire tuner, EMS14 Desk mic, PC25 DC cable

**FREE ITEMS** included with some radios.  
See Price Guide for details.



**DX-77T** 160-10M • 500kHz-30MHz general rx • SSB/CW/AM/FM • 100W (AM 40W) • 100 multi-function memories • Two VFOs • PC control via optional cable and software • Direct digital synthesis • Easy split operation mode • Multi-function control • CW narrow filters • Noise blanker • 6-50 WPM electric keyer • Full, semi or auto break-in CW • All mode squelch • Quick offset • Two scan modes • RIT • High/low power setting control • Selectable AGC • RF gain control (RX) • Dial lock • Auto antenna tuner interface • Industry standard power input plug • MARS/ CAP capability • Requires 13.8V DC @ 20A • 3.6" h x 9.5" w x 9" d, 8.3 lbs. .... **\$669.99**

### Available Accessories

DM330MVT 30 amp switching power supply with meter, ED55 5' mic extension cable, EDX2 160-10M auto wire tuner, EMS14 Desk top microphone, ERW4 PC cable, PC25 DC cable



## DUAL BAND BASE STATION

**IC-910H** VHF/UHF All Mode Transceiver With the optional 1200MHz installed, it becomes an SSB/CW/FM tribander. • 144-148, 430-450 and 1240-1300MHz (option) • 99 regular memories, 1 call, 6 scan edges for each band, 10 satellite • 5-100W (2m), 5-75W (440MHz), optional 1-10W (1200 MHz) • 3.5" multi-function LCD, 10-key direct entry keypad • Satellite mode support • Simultaneously works 2 bands in receive and full duplex • CW full support • Versatile scanning functions • Memory pad • 50 tone CTCSS encoder • One-touch and auto repeater functions • Speech compressor • IF shift • VOX • RIT • Requires 13.8V DC @ 23A • 9.5" w x 3.6" h x 9.4" d, 10 lbs ..... **\$1099.99**

### Available Accessories

AG1200 1.2ghz mast mount preamp, AG2400 2.4ghz mast mount down conv., AG25 2M mast mount preamp, AG35 430 mast mount preamp, CR293 High stability crystal unit, CT17 Level converter, FL132 500Hz main receiver CW filter, FL133 500Hz sub-band receiver CW filter, MB23 Carrying handle, MB5 Mobile mount, PS125 25A switching power supply, SM20 Stand mic for base stations, SP10 Slim-line external speaker, SP7 Small external speaker, UT102 Voice synthesizer, UT106 DSP unit, UX910 10W 1.2ghz module



## HF RADIOS

**IC-718** HF All Band Transceiver Advanced features and performance, yet easy to use. Its simplified operation is perfect for beginners or great as a backup rig. • Covers 160-10M • Continuous receive coverage 0.03-30MHz • 100W output (40W AM) • Built-in USB, LSB, CW, RTTY (FSK) and AM • 101 memories • Variety of scanning functions • Front mounted loudspeaker • IF shift • Microphone compressor • RF gain control • Noise blanker • RF attenuator and preamp • Auto notch • Ample CW features include an electronic keyer • VOX • Flexible filter selection • Digital S/R meter • High frequency stability • Optional voice synthesizer and DSP capability • Hand mic included • Requires 13.8VDC @ 20A • 9.4" w x 3.75" h x 9.4" d, 8.5 lbs .... **\$579.99**

### Available Accessories

AH2B Whip with mount, AH2BWHIPONLY Extra whip only for AH2B, AH4 80-6M 120W auto wire antenna tuner, AT180 HF+6M auto coax antenna tuner, CR338 High stability crystal, CT17 Level converter, FL222 1.9kHz 455kHz IF SSB filter, FL257 3.3kHz 455kHz IF SSB filter, FL52A 500Hz 455kHz IF CW filter, FL53A 250Hz 455kHz IF CW filter, FL96 2.8kHz 455kHz IF SSB filter, MB23 Carrying handle, MB5 Mobile mount, OPC025D DC cable, OPC598 23' extension cable for AT180, PS125 25A switching power supply, SM20 Stand mic for base station, SM6 Electret desk mic, SP20 Speaker with audio filter, SP21 Speaker, SP7 Small external spkr, UT102 Voice synthesizer, UT106 DSP unit



**IC-703** HF QRP Transceiver Multi-use versatility for the home or shack, mobile DX'ing in your car and as a field unit in the outdoors. Covers 160-10M and depending on the power supply, the rig is capable of 5W @ 9.6VDC and 10W @ 13.8VDC. It looks and feels like the famous IC-706 series, but in a QRP version without the VHF and UHF bands. The 703 offers a new built-in relay-type automatic antenna tuner for 50Ω antennas. • USB/LSB/CW/RTTY/AM/FM • 105 memory channels (99 split, 6 scan edges) • Maximum 10W output, adjustable steps (5W when using 9.6V batteries) • Memory keyer function • Large capacity external battery pack and antenna options suitable for field operation options • 6.563" w x 2.28" h x 4.875" d, 4.4 lbs ..... **\$669.99**

**IC-703 PLUS** Same as above, plus 6M. **\$769.99**

### Available Accessories

AH2B Whip with mount, AH2BWHIPONLY Extra whip only for AH2B, AH4 80-6M 120W auto wire antenna tuner, CT17 Level converter, FL222 1.9kHz 455kHz IF SSB filter, FL257 3.3kHz 455kHz IF SSB filter, FL52A 500Hz 455kHz IF CW filter, FL53A 250Hz 455kHz IF CW filter, HM118TNT TP microphone, LC156 Back pack carrying case, MB62 Mounting bracket for main unit, MB63 Mounting bracket for control panel, MB65 Mounting base platform, MB72 Carrying handle, OPC581 11.5' separation cable, OPC587 16' separation cable, OPC589 8-pin mic jack adapter cable, OPC599 7+8-pin-13-pin adapter, OPC742 13-pin cable, RMK706 Remote mounting kit, SM20 Stand mic for base station, SM6 Electret desk mic, SP10 Slim-line external speaker, SP7 Small external spkr, UT102 Voice synthesizer



**IC-746PRO** HF/VHF All Mode Transceiver 160-10M + 6M + 2M • Continuous receive 0.03-60MHz, 108-174MHz • 100W (40W AM) • 32-bit floating DSP and 24-bit AD/DA converter • AGC loop management • IF filter width and shape variable • All mode signal mod/demodulation • RTTY demodulator and decoder • Digital twin PBT capability • 100 memories (10 "memo pad") • PSK-31 • Auto antenna tuner • 2 antenna connectors for HF/6M • IF-DSP noise reduction, auto notch and selectable audio peak filters • Noise blanker • Spectrum scope • Twin passband tuning • Triple band stacking register • 2-step preamp • RF speech compressor • Tone squelch/scan • VOX • SmartTune™ variable speed tuning • Auto repeater duplex setting • Quick split • CW pitch control • QSK • 4-memory keyer • QSO serial number generator • Transmit audio monitor • Up/down frequency mic • Requires 13.8V DC @ 20A • 11.3" w x 4.7" h x 12.5" d, 19.6 lbs **\$1599.99**

### Available Accessories

BETIMATE Better RF accessory, AH2B Whip with mount, AH2BWHIPONLY Extra whip only for AH2B, AH4 80-6M 120W auto wire antenna tuner, CR338 High stability crystal unit, CT17 Level converter, OPC025D DC cable, PS125 25A switching power supply, SM20 Stand mic for base station, SM6 Electret desk mic, SP20 Speaker with audio filter, SP21 Speaker, UT102 Voice synthesizer



**Get more points this year!**

**IC-703**  
**The QRP Rig!**



## Go QRP with the '703!

*Get out and win that contest! Especially with the bands down, see how QRP and the low floor noise of the great outdoors can combine to bring you out on top! Visit AES today and go QRP with the '703!*

- **IC-706MKIIG Operations.** Anyone who has a '706 will know how to operate without the manual!
- **HF or HF & 6M.** Icom's engineers focused on the bands that really mean the most to QRP operators.
- **Internal Antenna Tuner.** 160-10M or 160-6M\*. Internal, automatic and designed with latching relays so no current draw when the match is achieved.
- **DSP.** That's right, pull out the weak signals! Automatic Notch and Noise Reduction is included.
- **Smart Power Mode.** The '703 knows when to throttle back the current to prolong battery life.

- **Low Current Consumption.** With current drain as low as 300mA on 9.6VDC, this QRP rig rivals some handheld radios. The '703 is designed for maximum efficiency!
- **CW Memory Keyer.** Contest QRP is sweet with the internal CW Memory Keyer. Three memories capable of holding 50 characters each. Variable pitch control (300-900Hz) with a bug, paddle, or straight key.
- **Big Ears.** Sensitivity of 0.16µVat 10dB S/N rivals some of the big rigs. This helps compensate for antenna compromises when you're in the field!
- **Cold Hands.** Don't worry, the '703 comes with the TXCO, so your frequency will not drift when you touch the knob with cold hands. Ready for outdoors!
- **Optional Backpack.** A must have accessory! With room for batteries and other gear! *See below.*
- **No Assembly Required.** The '703 is ready to go when you are!

### ACCESSORIES

#### LC-156 Backpack

Designed by hams, for hams! Take your hobby with you into the great outdoors. The LC-156 offers plenty of room to store and protect your '703, batteries, antenna, and other gear!

(So cool, even '706 owners want one!)



#### Controller Case

Great for portable use, the handy controller case can be easily removed from the backpack and attached to your belt.



Go QRP!

[www.icomamerica.com](http://www.icomamerica.com)

  
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# ICOM



**IC-706 MK II-G** Compact HF/VHF/UHF All Mode Base station performance and features in a mobile-sized package. Coverage 160-10M + 6M, 2M and 70cm • 0.03-200MHz broadband receive with wide AM and wide FM broadcast • 100W (40W AM) from 160-6M, 50W (40W AM) on 2M, 20W (8W AM) on 70cm • RTTY • PSK31 • AF speech compressor • 107 alphanumeric memories • Detachable control panel • 2 filter slots • AF-DSP • Tone encode, scan and squelch • Cross band split • Noise blanker • IF shift • Preamp/attenuator • CW keyer • CW pitch control/reverse • Full break-in • VOX • Simple bandscope • SWR graphic sweep display • One-button duplex and auto repeater • Large built-in speaker • 2 antenna connectors • Requires 13.8V DC @ 20A • 6.6" w x 2.3" h x 7.9" d, 5.5 lbs..... **\$799.99**

#### Available Accessories

BET706TUNECONT Better RF IC706 tune control, AH2B Whip with mount, AH2BWHIPONLY Extra whip only for AH2B, AH4 80-6M 120W auto wire antenna tuner, AT180 HF+6M auto coax antenna tuner, CR282 Stability crystal, CT17 Level converter, FL100 500Hz 9MHz IF CW filter, FL101 250Hz 9MHz IF CW filter, FL103 2.8kHz 9MHz IF SSB filter, FL223 1.9kHz 9MHz IF SSB filter, FL232 350Hz 9MHz IF CW/RTTY filter, HM118TNT TTP microphone, LC156 Back pack carrying case, MB62 Mounting bracket for main unit, MB63 Mounting bracket for control panel, MB65 Mounting base platform, MB72 Carrying handle, OPC02SD DC cord, OPC581 11.5' separation cable, OPC587 16' separation cable, OPC589 8-pin mic jack adapter cable, OPC598 23' extension cable for AT180, OPC599 7+8-pin-13-pin adapter, OPC742 13-pin cable, PS125 25A switching power supply, RMK706 Remote mounting kit, SM20 Stand mic for base station, SM6 Electret desk mic, SP10 Slim-line external speaker, SP7 Small external speaker, UT102 Voice synthesizer

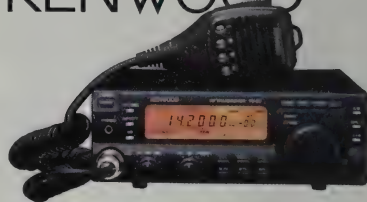


**IC-756PRO II** HF/50MHz All Mode Transceiver 32 bit floating DSP digital IF filter with 41 selectable bandwidths, microphone equalizer, manual notch function, TFT 5" color LCD (selectable colors/schemes), digital twin passband tuning, and PSK31. • Continuous 0.03-60MHz rx • 100W (AM 75W) • 101 memories • AGC loop management • RF speech compressor • Twin peak audio filter • DPSN • RTTY demodulator • Digital noise reduction • CW wave form • Spectrum scope • Digital voice memories • Memory keyer and pad • Analog and digital meters • Complete CW features • Dual watch • Triple band stacking register • Quick split function • Antenna tuner • RIT and ΔTX control for main and sub-band • Dual antenna system • VOX • 2-level preamp and 3-level attenuator • Auto TS function • Scanning functions • CTCSS tone encoder • Noise blanker level control • Lower band scope floor noise level • DVR (band scope enabled) • Independent digital and voice mode settings • Disable compression in digital modes • 1/4 tuning steps in digital modes • SSB/CW synchronous tuning • 13.3" w 4.3" h x 11.2" d, 21 lbs..... **\$2349.99**

#### Available Accessories

BETIMATE Better RF accessory, AH2B Whip with mount, AH2BWHIPONLY Extra whip only for AH2B, AH4 80-6M 120W auto wire antenna tuner, CT17 Level converter, HM36 Scanning hand mic, OPC02SD DC cable, PS125 25A switching power supply, SM20 Stand mic for base station, SM6 Electret desk mic, SP20 Speaker with audio filter, SP21 Speaker, UT102 Voice synthesizer

# KENWOOD



#### HF RADIOS

**TS-50S** HF Transceiver • Covers 160-10M • General coverage receive 500kHz-30MHz • 100W output SSB/CW and FM (AM 25W) • 100 memory channels • Multiple scan functions • Powerful menu system • Dual VFOs • Comprehensive interference reduction • Full and semi break-in • CW reverse mode • All-mode squelch • IF shift • Switchable AGC • 20dB attenuator • Noise blanker • Multi-function hand mic • 7" w x 2.3" h x 9.1" d, 6.4 lbs..... **\$649.99**

#### Available Accessories

AT50 HF external auto tuner, KPS15 23A switching power supply, MC47 8-pin hand mic, MC60A 8-pin amp desk mic, MC80 8-pin electret desk mic, PG2Y DC cable, PG2Z 6.5' heavy-duty DC cable, PG4M 18' extension cable for the AT50, PS53 Heavy-duty power supply, SO2 TCXO unit, SP23 Speaker, SP50B External mobile speaker, TC50 Travel case, YK107C 500Hz CW filter

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**



**TS-570D(G)** HF Transceiver • Covers 160-10M • General coverage receive 500kHz-30MHz • Variable output: 5-100W SSB/CW/FM and FSK (AM 25W) • 100 memories with extensive functions • Large amber-colored backlit LCD display • 10-key direct entry • 46 EZ-to-use menu functions • Multiple scanning functions • 16-bit AF-stage DSP VOX • XIT/RIT • IF shift • Noise blanker • All mode squelch • TX audio shaping • Built-in electronic keyer • Full and semi break-in CW • CW message memory • CW auto tune • 38 tone CTCSS encoder and 1750Hz tone • TX audio shaping • Packet and FSK • PC control option • Two antenna ports and packet port • Built-in automatic antenna tuner • Requires 13.8V DC @ 20.5A • 10.6" w x 3.7" h x 10.6" d, 15 lbs • **\$100 Factory Rebate thru 11/29/03 (U.S. only)..... \$1089.99**

**TS-570S(G)** HF+6M Transceiver Same as the TS-570D(G), but covers 160-10M plus 6M. 50-54MHz general coverage receiver • **\$100 Factory Rebate thru 11/29/03 (U.S. only)..... \$1259.99**

#### Available Accessories

DRU3A Digital recording unit, KPS15 23A switching power supply, MB430 Mobile mounting bracket, MC435 8-pin hand mic, MC60A 8-pin amp desk mic, MC80 8-pin electret desk mic, MC90 2-head DSP desk mic, PG2Y 13' DC cable, PG2Z 6.5' heavy-duty DC cable, PS53 Heavy-duty power supply, SO2 TCXO unit, SP23 Speaker, SP50B External mobile speaker, VS3 Voice synthesizer, YK88CN1 270Hz CW filter, YK88C1 500Hz CW filter, YK88SN1 1.8kHz SSB filter

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# The Most Versatile High Performance Amateur Transceiver Ever Produced.



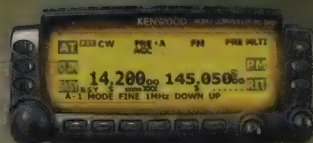
**TS-2000**  
HF/VHF/UHF Multi-Mode

or



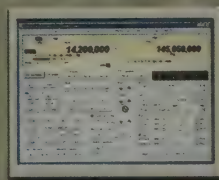
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**In the car  
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HF/VHF/UHF DSP  
performance available.**



**RC-2000**  
Compact Mobile Controller

**At home, get PC  
operation versatility  
for saving different  
operation profiles.**



**ARCP-2000**  
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**FREE**  
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software  
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The Kenwood TS-2000 system offers Amateurs the versatility of operation that has never been achieved. This Multi-band/Multi-mode transceiver offers several different operation methods that provide Amateurs with both high performance not available on competitive models as well as 4 distinct methods to operate. The TS-2000 is available with a full functioning front panel or as a "high tech" self enclosed TS-B2000 model. Both units can also utilize the 1.2 GHz UT-20 module for the widest range of transmit capabilities. Both units can be operated with the ARCP-2000 Radio Control Software or the unique, easy to use RC-2000/TM-D700A remote controller. Older TM-D700A displays can be modified to operate the TS-2000 series also. If that wasn't enough, Kenwood offers the capability to use the popular TH-D7AG handheld to operate HF and 6M via SkyCommand II.\* The TS-2000 also is the World's First HF radio that has PC Flash-ROM capability, which means in the future your TS-2000 is self-upgradeable, no new versions or models to buy. It's easy to see the TS-2000 all adds up to the transceiver with features designed for the future, available today.



**TH-D7AG**  
SkyCommand II

**KENWOOD**  
COMMUNICATIONS

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01ARD-2149 #092201 \*Skycommand II is pending FCC rule change.

03ARD-2232 #022403



**ISO 9001**  
**JQA-1205**

Communications Equipment Division  
Kenwood Corporation  
(30000) certification

## INTERNET

Kenwood Website  
<http://www.kenwood.net>  
Kenwood Information  
<ftp://ftp.kenwood.net>



# KENWOOD



**TS-870S** All Mode HF Transceiver • Covers 160-10M • General coverage receive 100kHz-30 MHz • 100W output SSB/CW/FM/FSK (25W AM) • 100 memory channels • Multiple scanning modes • Menu function • Variable AGC • IF digital filter (DSP) • DSP detection • Dual mode noise reduction • Automatic notch filter • Voice equalizer • Speech processor • Transmit equalizer VOX • QSK digital IF filter • DSP noise reduction • IF stage auto-notch beat cancel function • Variable AGC circuit • Built-in electronic keyer • CW pitch control • CW reverse • Radio control software program • Auto antenna tuner on transmit and receive • Built-in antenna tuner dual antenna terminals • External receiver antenna output jack • EZ menu system CTCSS encoder • High quality digital recording option • RS-232C port • Requires 13.8V DC @ 20.5A • 13" w x 4.75" h x 13" d, 25 lbs. .... **\$2299.99**

#### Available Accessories

DRU3A Digital recording unit, KPS15 23A switching power supply, MC435 8-pin hand mic, MC60A 8-pin power desk mic, MC80 8-pin electret desk mic, MC90 2-head DSP desk mic, PG2Y 13' DC cable, PG2Z 6.5' heavy-duty DC cable, PS52 Heavy-duty power supply, SO2 TCXO, SP31 External speaker, VS2 Voice synthesizer



**TS-2000** HF/VHF/UHF All Mode Transceiver Offers 3 platforms: traditional transceiver with full function front panel, high-tech looking "silver box" version (TS-B2000), or computer controlled with software • 100W output on HF, 6M and 2M; 50W on 70cm; 10W on 1.2GHz (optional) • High performance true IF/stage DSP on main band, AF stage DSP on sub-band • Wide band receive • Digital filtering • Dual receive • Satellite ready, with transverter frequency display • Cross band repeat • Built-in auto tuner HF through 6M • Built-in TNC • Built-in RS-232 for computer control • Built-in TCXO (S.P.P.M.) • CTCSS/DCS enc/dec • Electronic memory keyer • Backlit front key panel • 5+1 antenna ports - 2 for HF and 6M, 1 each for 2M, 70cm, 1.2GHz and HF receive ..... **\$1699.99**

**TS-B2000** HF/VHF/UHF All Mode Transceiver Same as the TS-2000 with high-tech "silver box" look. Includes PC control software ..... **\$1549.99**

**TS-2000X** HF/VHF/UHF All Mode PC Controlled Transceiver TS-2000 w/1.2GHz ..... **\$2299.99**

#### Available Accessories

ARCP2000 PC/radio control software (included with B2000 model), DRU3A Digital recording unit, KPS15 23A switching power supply, MB430 Mobile mounting bracket, MC435 8-pin hand mic, MC57DM Lit TTP mic, MC60A 8-pin power desk mic, MC80 8-pin electret desk mic, MC90 2-head DSP desk mic, PG2Y 13' DC cable, PG2Z DC cable, PS53 Heavy-duty power supply, RC2000 Remote face plate mobile kit, VS3 Speaker, VS3 Voice synthesizer

# MFJ ENTERPRISES, INC.



**8708** Micro ATV Transmitter Transmits a high quality amateur television audio and video signal on 433.97MHz (cable channel 58, 59 or 60). Plug in an antenna and a video source (video camera, camcorder, or VCR). With a TV set, or down converter, tuned to the appropriate channel, you'll have a complete low power ATV video station. Puts out 50 to 100mW signal, capable of transmitting up to 1.8 miles with a 3-element beam. By using a suitable UHF amplifier, enjoy ATV communications over an extended range with other ATV ham operators. Requires 9V battery or other source. .... **\$149.99**



## ORP SINGLE BAND CW TRANSCEIVERS

Easy operation! Sets up in seconds. • 5W CW • Great sensitivity - hot superhet receiver with super-quiet FET post amp stage in the IF filter • Excellent selectivity - tight CW bandwidth crystal ladder filter fights unwanted QRM and noise • Smooth and stable VFO (wide-spaced reduction drive VFO capacitor) • True RIT • Recovery AGC • Built-in 3" speaker • Low power drain - 50mA on receive and 1.2A peak on transmit • Semi-QSK - set adjustable hold transmit/receive switching to suit your normal sending speed or set for full QSK during contests • Compact • Four models below

**9015** 5W, 15M (21.000-21.200MHz) ..... **\$169.99**

**9020** 5W, 20M (14.000-14.075MHz) ..... **\$169.99**

**9030** 5W, 30M (10.100-10.150MHz) ..... **\$169.99**

**9040** 5W, 40M (7.000-7.150MHz) ..... **\$169.99**

#### Available Accessories:

1772 Portable 20M dipole, 1774 Portable 40M dipole, 27 Handle for CW station, 4110 portable AC power supply, 4114 Rechargeable power pack, 412 Plug-in Curtis keyer, 726 Plug-in audio filter, 971 200W portable antenna tuner/meter

## Look For This

NEW

## & Check Out AES' Latest Additions.



## LOW POWER SINGLE BAND SSB TRANSCEIVERS

No microprocessor - turn on and tune in. • 20W PEP (Less on VHF models) - plus Constant Current™ syllabic speech processing for an added 4-6dB advantage to cut through noise, fading, and QRM • Handheld dynamic mic that complements speech processing • Low drain - 3A from 12V supply or battery • Low noise preamp and active double balanced mixer front end • Sharp 2.3kHz SSB crystal ladder filter reduces passband noise, fights QRM, and improves intelligibility • TVI protection (built-in 7 element lowpass filter) • Real S-meter • Reduction drive analog VFO allows scanning the band for signals quickly, then zeros in smoothly • Amplifier jack • 2.5" h x 6.5" w x 6" d

**9420X** 20M SSB (14.150-14.350MHz) ... **\$229.99**

**9440X** 40M SSB (7.150-7.3MHz) ..... **\$229.99**

**9475X** 75M SSB (3.75-4.00MHz) ..... **\$229.99**

#### Available Accessories:

4110 Portable AC power supply, 4114 Rechargeable power pack, 415B CW adapter (9420X and 9440X only), 971 200W HF tuner



## HF SSB TRANSCEIVERS

**SG-2000 (04-01)** HF SSB Global Radio Telephone With full frequency coverage for voice and data. Talk anywhere in the world on the HF Ham bands, receive and send time sensitive documents, decode UPI transmissions, get latest weather reports or listen to shortwave broadcasts. Also, great for marine use. It can be fully computer controlled via a standard RS-232 connector. The front panel can also be used as a remote head terminal (up to 8 remote heads can be utilized). • 1.8-30MHz tx, 500kHz-30MHz general rx • 150W • Modes: A3A, A3H, A3J and CW in LSB/USB, true AM in receive mode and data • 100 field-programmable and 644 factory-programmed ITU & data channels • 100 programmable scan channels • 13.6 VDC @ 16A • 4.75" h x 10" w x 15" d, 12 lbs. .... **\$1569.99**

#### Available Accessories:

0411 Standard remote head/bracket/20' cable, 0415 Remote mobile head (memory channels only), 5182 Fan kit for continuous transmit, 5234 RS232 interface, 5251 CA-1 HV feed wire, 5254 CA-2000 remote head cable, 5261 PSC/12-1 12' power supply cable/1 plug, 5262 PSC/12-2 12' power supply cable/2 plugs, 5304 PS-30 30/40A peak unregulated power supply, 5305 PS-50 50/70A peak unregulated power supply



# Space Station to your Station



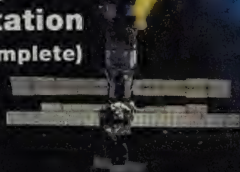
**TM-D700A**  
2 meters & 440 MHz

**International  
Space Station**  
(On Board Soon)



**TM-V7A**  
2 meters & 440 MHz

**MIR  
Space Station**  
(Mission Complete)



## The Chosen Few

Kenwood is proud to be the only company chosen as a participant in both the INTERNATIONAL SPACE STATION (ISS) and MIR space programs. The TM-V7A received awards from the Russian Space Agency for its flawless performance aboard MIR. The KENWOOD TM-D700A 144/440MHz FM Dual Bander is scheduled to join the International Space Station in orbit later this year. But is it any wonder? This world class voice and data communicator has technologies which are perfect for any mission, whether on planet earth or in outer space. This all goes to show that operating a Kenwood Amateur Radio is out of this world.

**KENWOOD**  
COMMUNICATIONS

AMATEUR RADIO PRODUCTS  
3975 Johns Creek Court, Suwanee, GA 30024  
P.O. Box 22745, Long Beach, CA 90801-5745, U.S.A.  
Customer Support: (310) 639-4200 Fax: (310) 537-8235  
#080703

**INTERNET**

Kenwood Website:  
<http://www.kenwood.com>  
Download information  
on the Internet



ISO 9001  
JQA-1205





**PowerTalk™ SG-2000 (04-10)** HF SSB Transceiver With the PowerTalk™ SG-2000, you'll intercept more weak HF signals, increase signal clarity and eliminate unwanted noise. You'll hear SSB signals clearer and easier than ever before. Combines SGC's exclusive ADSP™ (Automatic Digital Signal Processing) and SNS™ (Signal Noise Subtraction). A DSP command center with a high performance spinner knob and bright LED indicators. Includes all of the outstanding features of the SG-2000: 644 Ham and ITU discrete frequencies • 150W • Programmable memory • Large LCD ..... **\$1849.99**

#### Available Accessories:

5234 RS232 Interface, 5251 CA-1 HV feed wire, 5254 CA-2000 remote head cable, 5261 PS-12/12-1 power supply cable/1 plug, 5262 PS-12/12-2 power supply cable/2 plugs, 5304 PS-30 30/40A peak unregulated power supply, 5305 PS-50 50/70A peak unregulated power supply



**SG-2020 (05-01)** Compact HF SSB/CW Transceiver Small, but fully microprocessor-controlled and loaded with "Big Rig" features. Take it and use it anywhere – fixed, mobile, portable, aviation or boating. Operating from 12V DC, it has the lowest current consumption on the market. • 1.8–29.7 MHz amateur bands • 400kHz–29.7MHz general coverage receive • SSB/CW modes • 0–20W PEP output, ad-justs down to 1W for QRP • 40 memories • Backlit LCD display • Built-in IAMBIC "B" mode electronic keyer • Noise blanker • RF speech processor and clipping • SWR metering and voltage indicator • SPLIT, RTT, XIT • AF bandpass tuning • Handheld, dynamic microphone • Requires 13.8V DC @ 3A • 2.75" h x 6" w x 7.5" d, 4.5 lbs. **\$669.99**

**SG-2020 (05-04)** Same radio as above with 20 memories and the addition of ADSP™. The added PowerClear™ DSP software provides superior tone rejection (better than 57dB) and dynamic noise rejection (better than 18dB) ..... **\$789.99**

#### Available Accessories:

5422 SG-239 200W SmartTuner



### HF TRANSCEIVERS

**FT-100D** Ultra-Compact HF/VHF/UHF All Mode Transceiver Widely acclaimed for outstanding performance and flexibility. Wide frequency coverage and versatile – a great compact mobile, vacation or expedition radio. Covers 160–6M, 144–148MHz, 430–450MHz • General receive: 100kHz–30MHz, 30–970MHz (cell blocked) • 100W output on HF/6M; 50W on 2M; 20W on 430MHz • DSP system enhances signal-to-noise ratio via bandpass, noise reduction and automatic notch filters • Dual VFOs • Electronic keyer built-in • 349 memories, including 4 Quick Banks • SmartSearch™ auto memory channel loading • Improved high-quality speaker • 500Hz, 8-pole crystal filter (CW) • High stability reference oscillator • CTCSS decode • Bright, multi-function LCD • VOX • Requires 13.8V DC @ 22A • 6.3" w x 2.1" h x 8" d ..... **Closeout \$949.99**

#### Available Accessories:

ATAS100 HF/6M/2M/430MHz motorized antenna, ATAS120 HF/6/2/430 antenna, ATBK100 ATAS100 base kit/use with mount, CT39 Packet cable, CT58 Band data cable, CT62 CAT interface cable, CT69 6-pin mod/8-pin mic jack, FC20 Automatic antenna tuner, FP1023 23A switching power supply with fan, FP1030A 25A power supply with meters, LL5 Phone patch unit, MLS100 Mobile speaker, MMB62 Remote control panel bracket, MMB67 Quick release bracket, SP6 External speaker, T9021925 Extra DC cord, XF117A 6kHz AM filter, XF117CN 300Hz CW filter, YH77STA Stereo headphone, YSK100 Separation kit



**FT-817** HF/VHF/UHF Backpack Transceiver Self-contained and low power for portability. • 160–10M, 50MHz, 144MHz, 430–450MHz, plus Alaska Emergency Channel (5167.5kHz) tx • 100kHz–56 MHz, 76–154 MHz, 420–470MHz, plus AM aircraft rx • 200 alphanumeric memories (home channels and band-limit) • SmartSearch™ memory loading • 5W SSB/CW/FM (13.8V external DC), 1.5W AM, 2.5W SSB/CW/FM (9.6V NiCad pack or 8 AA's, includes internal alkaline case), 0.7W AM, up to 5W SSB/CW/FM power programmable via menu (NiCad or AA's) • USB, LSB, CW, AM, FM, W-FM, AFSK, packet • RTTY, PSK31-U, PSK31-L, user-defined USB/LSB • 2-color, multi-function LCD • Meters ALC, power output, SWR, modulation • RF gain/squelch control • Noise blanker • Attenuator • Dual VFOs, split capability, IF shift, and RTT • Electronic keyer • VOX • Auto repeater shift • CTCSS/DCS • Front/rear antenna jacks • 3 accessory jacks • PC control capability • 5.31" w x 1.5" h x 6.5" d, 2.6 lbs ..... **\$729.99**

#### Available Accessories:

W4ROTT1 One-touch tune, CSC83 Soft case, CT39 Packet cable, CT62 CAT interface cable, EDC6 DC cord, FNB72 9.6V 1000mAh NiCad, MH36E8 TTP mic, MLS100 Mobile speaker, NC72B Wall charger, TCX09 TCXO unit, YF122C 500Hz Collins CW filter, YF122CN 300Hz Collins CW filter, YF122S 2.3kHz Collins SSB filter



**FT-840** Compact High Performance HF Transceiver Blending high performance digital synthesis techniques, convenience and affordability from previously successful radios, the FT-840 adds a choice of two optional remote automatic antenna tuners and a wealth of convenient functions. • Direct Digital Synthesis • Covers 160–10M with 50 kHz–30MHz general coverage receiver • 100W output (25W AM) • 100 memory channels • Low noise FET front end • Two direct digital synthesizers (DDSS) and magnetic rotary encoder for smooth tuning • Twin band-stacking VFOs • IF shift • Reverse CW • FM repeater with auto 10M repeater offset • Selectable CTCSS • Requires 13.8V DC @ 20A • 9.2" w x 3.6" h x 9.5" d, 9.9 lbs ..... **\$699.99**

#### Available Accessories:

FC10 Extra coax fed auto tuner, FC800 Extra long wire auto tuner, HF232C RS-232 interface, FM747 FM unit, FP1023 23A switching power supply with fan, FP1030A 25A power supply with meters, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, MLS100 Mobile speaker, MMB20 Mobile mount, SP6 External speaker, TCX04 TCXO unit, T9018320 DC cord, YF112A 6kHz AM filter, YF112C 500Hz CW filter, YH77STA Stereo headphone

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**



**FT-847** HF/VHF/UHF All Mode Transceiver All mode operation on HF, 50MHz, 144MHz, and 430MHz with full satellite capability • Covers 160–6M, 2M, 70cm and 5.1675MHz (Alaska emergency channel) • General receive: 100kHz–30MHz, 36–76MHz, 108–74MHz, 420–512 MHz • 100W output on HF/6M (25W AM); 50W (12.5W AM) on 2M/430 MHz • High resolution 0.1Hz tuning steps • Shuttle-Jog™ tuning ring • Direct frequency keypad entry • Low noise VHF/UHF preamps built-in • Advanced DSP system enhances signal-to-noise ratio via sophisticated bandpass, noise reduction and automatic notch filters • Cross band full duplex operation • Normal/reverse tracking • Dedicated satellite memories • 1200/9600 bps packet ready • CW side-tone/pitch control • Built-in CTCSS/DCS • Four antenna jacks (rear panel) • Requires 13.8V DC @ 22A • 10.2" w x 3.4" w x 10.6" d, 14.4 lbs • **\$300 Factory Rebate thru 12/31/03** ..... **\$1579.99**

#### Available Accessories:

ATAS100 HF/6M/2M/430MHz motorized antenna, ATAS120 HF/6/2/430 antenna, ATBK100 ATAS100 base kit, CT39 Packet cable, CT61 Amp interface cable, FC20 Automatic antenna tuner, FP1023 23A switching power supply with fan, FP1030A 25A power supply with meters, FV51A Voice synthesizer, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, MH36D8 DTMF mobile microphone, MMB66 Mobile mounting bracket, SP8 External speaker with filters, T9018320 DC cord, YF115C 500Hz CW/Collins Mechanical filter, YF115S02 2.5kHz SSB/Collins Mechanical filter, YH77STA Stereo headphone





**FT-857** Ultra-compact, HF/VHF/UHF 100W All-Mode Mobile Transceiver Blends the leading-edge technologies of the FT-897 and MARK-V into the world's smallest full-power HF multi-mode transceiver. Unique ergonomics deliver unmatched ease of use with an ultra-compact design featuring a large, main tuning dial. • 100W HF/6M, 50W 2M, 20W 70cm • Transmits on HF, 50MHz, 144MHz and 430MHz, plus 0.1–56MHz, 76–108MHz, 118–164MHz and 430–470MHz receive • 200 memories with 10 memory groups • Enhanced performance with optional DSP board • Large, multi-color dot matrix display • IF shift and noise blanker • IPO • AGC • CTCSS/DCS • Auto repeater shift • Smart-Search™ • Spectrum scope • ARTS™ • Optional remote-head operation and remote control microphone • 6.1" w x 2.0" h x 9.2" d, 4.6 lbs..... **\$799.99**

#### Available Accessories:

ATAS100 HF/6M/2M/430MHz motorized antenna, ATAS120 HF/6/2/430 antenna, ATBK100 ATAS100 base kit, CT39 Packet cable, CT58 Band data cable, CT62 Cat interface cable, DSP2 DSP unit, FC30 External antenna tuner, FP1023 23A switching power supply, FP1030A 25A power supply with meters, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk microphone, MH36E8J TTP microphone, MH59A8J Remote control TTP microphone, MLS100 Mobile speaker, SP6 External speaker, TCX09 TCXO unit (0.5ppm), YF122C 500Hz Collins CW filter, YF122CN 300Hz Collins CW filter, YF122S 2.3kHz Collins SSB filter, YH77STA Stereo headphones, YSK857 Separation kit



**FT-920** HF + 50MHz All Mode Transceiver Direct digital frequency synthesis • 160–6M with 100 kHz–30MHz, 48–56MHz general receive • Power adjustable up to 100W (25W AM) • Multi-function tuning dials and keyboard frequency entry • 127 alphanumeric memories • Multiple scanning functions • Dual watch system • Quick memory bank system • Built-in high-speed antenna tuner, digital voice recorder and electronic memory keyer • DSP speech processor, auto notch filter, noise reduction and VOX control • CW spot and pitch controls IF shift • QSK and built-in electronic keyer • Noise blanker • Dual antenna jack plus receive-only antenna jack • Shuttlelog™ control • Independent RX preamps for high and low bands • OmniGlow™ LCD with twin frequency displays • RS-232 computer control interface • Requires 13.8VDC @ 22A • 15.2" w x 5.3" h x 12.5" d, 24 lbs..... **\$1199.99**

#### Available Accessories:

FM1 FM unit, FP1023 23A switching power supply with fan, FP1030A 25A power supply with meters, LL7 Phone patch unit for SP8, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, SP8 External speaker with filters, TCX07 TCXO unit, T9018320 DC cord, YF116A 6kHz AM filter, YF116C 500Hz CW filter, YH77STA Stereo headphone

**FT-897** HF/VHF/UHF Multi-Mode Portable/Base Self-contained transceiver able to operate without external power supply! Using the optional 13.2V @ 4500mAh NiMH battery pack, operates at 20W on all bands except 430MHz (10W). Two batteries may be installed simultaneously giving up to 8 hours of use. • 100W (HF/50MHz), 50W(144MHz) and 20W (430MHz) on external 13.8V DC • Adjustable down to 5W • SSB/CW/AM/FM and digital modes • Large-diameter main tuning dial, similar to a base station • Built-in DSP • Selectable tuning steps (2kHz/4kHz) • Easy receiver offset tuning (clarifier) • Scrolling front panel, multi-function keys with instant "hot key" switching • RS-232 port • Built-in keyer • Rugged, aluminum, die-cast chassis • Thermostatically-controlled twin cooling fans • Optional HF/50MHz automatic antenna tuner (external mount) • 7.9" w x 3.14" h x 10.3" d, 8.6 lbs..... **\$989.99**

#### Available Accessories:

ATAS100 HF/6/2/430 motorized antenna, ATAS120 HF/6/2/430 antenna, ATBK100 ATAS100 base kit; use with mount, CD24 4-hour charge adapter, CT39 Packet cable, CT62 Cat interface cable, FC30 Antenna tuner, FNB78 4.5ah NiMH, FP30 Internal power supply, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, MH36E8J TTP mic, MLS100 Mobile speaker, MMB80 Mounting bracket, PA26B Charger for CD24, SP6 External speaker, TCX09 TCXO unit, T9018320 DC cord, YF122C 500Hz Collins CW filter, YF122CN 300Hz Collins CW filter, YF122S 2.3kHz Collins SSB filter, YH77STA Stereo headphones



**FT-1000D** 200W HF All-Mode Transceiver Optimum receiver performance and real "muscle" on transmit. With a front panel featuring two fly-wheel weighted tuning knobs and two large displays, it's a perfect blend of ergonomics and electronics. • Direct Digital Synthesis • 160–10M with 100kHz–30MHz general receive • 100 memories store frequency, mode, and filter • Up to 200W output (AM 50W) • True cross-band dual receive (dual receiver front ends and IFs), two large tuning knobs • Front panel receive antenna switch for beverage or loop antenna • Built-in antenna tuner with 32 memories • CW spot and two CW key jacks for maximum convenience • CAT system for computer control • Built-in 110/220VAC power supply • 5.9" h x 16.4" w x 14.8" d, 31lbs..... **Closeout \$3999.99**

#### Available Accessories:

DVS2 Voice recording module, HF232C RS-232 interface, LL5 Phone patch unit, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, SP5 External speaker, YF110CN 250Hz CW filter/XFE, YH77STA Stereo headphone

**FT-1000MP MK V** 200W HF All Mode Transceiver The crowning achievement in Yaesu's HF transceiver design history. A unique blend of analog and digital technology, the MARK-V is based on the concept of rigorous filtering in all stages of the receiver and transceiver. Introduces all-new features to the FT-1000 series. • Interlocked Digital Bandwidth Tracking, which matches the receiver passbands of the 8.2MHz IF, 455kHz IF and DSP systems • Variable RF Front-end Filter, providing a high-Q "Preselector" system protecting the receiver's front end • 200W MOSFET final amplifier, conservatively rated with revolutionary heat sink design • 75W optional Class-A PA operation, providing extraordinary SSB signal purity • Integrated Shuttlelog™ control, combines IBDT and VRF access buttons with the Shuttlelog™ frequency control • High-speed automatic antenna tuner for 200W operation • Separate switching power supply, provides 30V for MOSFET PA transistors, and 13.8V for other circuitry • 16.4" w x 5.4" h x 13.9" d, 31 lbs. (xcvr), 4.2" w x 5.4" h x 13.6" d, 13 lbs. (power supply)..**\$2699.99**

#### Available Accessories:

DVS2 Voice recording module, FH1 Remote control keypad, FTV1000 200W 6M transverter, LL7 Phone patch unit for SP8, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, MH31B8 Extra hand mic, SP8 External speaker with filters, TCX06 Deluxe TCXO unit, YF110CN 250Hz CW filter/XFE, YF110SN 2kHz SSB filter/XFD, YF114CN 250Hz CW second IF main receive, YF114SN 2kHz SSB second IF main receive, YF115C 500Hz CW/Collins Mechanical filter, YH77STA Stereo headphone

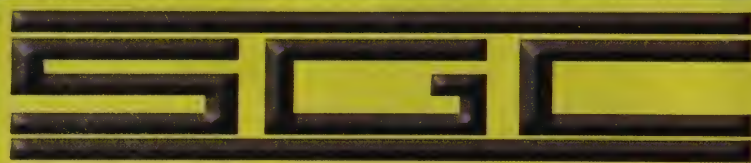


**MK V FIELD** Leading-Edge Technology, 100W Self-Contained Design 160–10M tx (amateur only), 100kHz–30MHz rx • All modes • Adjustable up to 100W (25W AM) • Selectable Class-A 25W SSB output • Self-contained 117/200VAC power supply, 13.8VDC optional • Built-in TCXO • Dual receive with independent AGC systems • Integrated digital bandwidth tracking • Enhanced DSP • Digital SSB mic equalizer and RF speech processor • Selectable digital modulation/demodulation • Digital auto-notch • Variable RF front-end filter • Selectable SSB pattern-contour filters • Three RF preamp modes • IPO (Direct Mixer Feed) • IF filter chain includes 10-pole Collins mechanical filter • Built-in antenna tuner • Electronic memory keyer • Outstanding CW features • Ergonomic, multi-function shuttle jog dial • 16" w x 5.3" h x 13.7" d, 33 lbs..... **\$2179.99**

#### Available Accessories:

DVS2 Voice recording module, FH1 Remote control keypad, FP29 Power supply for FTV1000, FTV1000 200W 6M transverter, LL7 Phone patch unit for SP8, MD100A8X Desk mic with tone control, MD200A8X Deluxe high fidelity desk mic, MH31B8 Extra hand mic, SP8 External speaker with filters, TCX06 Deluxe TCXO unit, YF110CN 250Hz CW filter/XFE, YF110SN 2kHz SSB filter/XFD, YF114CN 250Hz CW second IF main receive, YF114SN 2kHz SSB second IF main receive, YF115C 500Hz CW/Collins Mechanical filter, YH77STA Stereo headphone



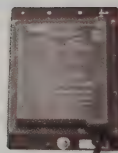


# Your

## *Hidden Operation*

Facing restrictions? You want to be heard but not seen?

**Solution:** With an SGC Smartuner™ and a length of wire, you can run an antenna to fit the space you have available and still maximize your signal. There is no limit to the hidden solutions you can come up with. Talk to us about YOUR installation needs!



*SG-237  
Cat# 54-18*



*SG-239  
Cat# 54-22*

## *On a Budget?*

Always wanted a Smartuner, but didn't think you could afford it?

**Solution:** The SG-239 Budget Smartuner now available for a new low price. Smartuners are the original and still the best. You CAN afford SGC.

*Smart Choice! Smartuner*

## *Portable, Emergency Operation*

It's a dark and stormy night and all the antennas are down!

**Solution:** The SGC STEALTH kit gets you on the air. It includes our most versatile Smartuner, the SG-237 as well as the wire and accessories you need to erect an emergency antenna.



*SG-2020 ADSP<sup>2</sup>  
Cat# 05-04*



*STEALTH Kit  
Cat# 54-23*



Portable operation can be rough. It can be tough. It can be damaging to your equipment especially in an emergency.

**Solution:** The SG-2020 ADSP<sup>2</sup> sets the standard for quality and reliability. It's a professional, rugged, portable HF radio with up to 26 dB of noise reduction. Perfect for base, backpack, or business trip.

Email: [sgc@sgcworld.com](mailto:sgc@sgcworld.com) Web: [www.sgcworld.com](http://www.sgcworld.com)



# HF Solution



## *Multiple Antennas*

Too many antennas and you want to tune them all?

**Solution:** The MAC-200 controls 5 antennas. It has a built in tuner and automatically selects the right antenna and the right settings for every HF frequency you operate. Handling an antenna farm was never as easy as this!



MAC-200  
Cat# 54-25

## *Any Transceiver/Any Antenna*

The best transceiver and the best antenna for your needs probably don't match.

**Solution:** SGC Smarttuners work with any transceiver and any antenna. They operate independently. They are simple to use: just press the microphone key and transmit! It's so easy, people often install a Smarttuner and forget it's there.



SG-231  
Cat# 54-17

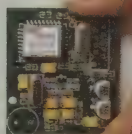
## *Noise Reduction for Everyone!*

Crowded Bands = Noisy Bands

**Solution:** Get a clearer signal with ADSP<sup>2</sup>. It provides noise reduction beyond what is available in high-end base station units.

With up to 26 dB of noise reduction along with three proprietary band pass filters, ADSP<sup>2</sup> can be fitted to nearly any transceiver or enhance your ability to pull signals out of the background noise.

ADSP<sup>2</sup> Lo  
Cat# 70-11



ADSP<sup>2</sup> Speaker  
Cat# 70-14



SGC Building, 13737 SE 26th Street, Bellevue, WA 98005 USA 425-746-6310



Manufacturer	ALINCO*	ALINCO*	ICOM*	ICOM*	ICOM	ICOM	ICOM	KENWOOD	KENWOOD	KENWOOD	TS-870S	MFJ
Model	DX-77TH	DX-77T	IC-103 IC-103PLUS	IC-706NKiG6	IC-718	IC-746PRO	IC-746PR0II	TS-2000 TS-B2000 TS-2000X	TS-50S	TS-5700(C)	TS-5705(G)	9015
Bands	HF 6M 6M (Plus only) 30-60 (Plus only)	HF 6M (Plus only) 30-60 (Plus only)	HF 6M 2M 70CM 30-200 400-470	HF 6M 2M 70CM 30-200 400-470	HF	HF 6M, 2M .03-200	HF 6M .03-60	HF 6M, 2M 70CM, 1.2GHz .03-60, 142-152 420-450 1200-1300*	HF	HF	HF 6M 5-30, 6M 5-100W HF/6M	15M 20M 21- 21.2 14.075
Rx Range (MHz)	15-30, 50-54	5-30	30-60 (Plus only)	400-470	.03-30	.03-200	.03-60	1200-1300*	5-30	5-30	5-30, 6M 5-100W HF/6M	20M 21- 21.2 14.075
Power (SSB/CW/FM)	100W HF/6M	100-10W	10/5W	5-100W HF/6M 5-50, 2M 2-20, 70CM	5-100W HF/6M 5-100W HF/6M/2M	5-100W HF/6M/2M	5-100W HF/6M/2M	100W HF/6M/2M 50W 70CM 10W 1.2GHz*	100W	5-100W	5-100W HF/6M	5W CW 5W CW
Power (AM)	40W HF/6M	4-40W	2/4W	2-40W HF/6M 2-20W 2M 2-8W 70CM	2-40W	5-40W HF/6M/2M	5-40	25W HF/6M/2M 12.5W 70CM 2.5W 1.2GHz*	5-40W	5-25W	5-25W	No
DSP Tuner	No	No	Yes	Yes	Optional	Yes	Yes	Yes	No	Yes	Yes	No
Keyer	No	No	Yes	Optional	Optional	Internal	Internal	Yes	No	Yes	Yes	No
Speech Readout	No	No	Optional	Yes	Optional	Optional	Optional	Yes	No	Optional	Optional	No
Vox	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Power Requirements	12VDC 20A	12VDC 20A	9-15.8VDC 1A	12VDC 20A	12VDC 20A	12VDC 20A	12VDC 23A	12VDC 20.5A	12VDC 20.5A	12VDC 20.5A	12VDC 20.5A	12VDC 12A
Antenna ports	2 <sup>nd</sup>	1	1	2 <sup>nd</sup>	1	3 <sup>rd</sup>	2	5	1	2	2	1
Computer Port	No	Optional	Yes	Optional	Optional	Optional	Optional	Yes	Optional	RS-232	RS-232	No
Height (in.)	23	3.7	2.3	2.3	3.75	4.7	4.3	3.75	2.4	3.8	4.8	2.5
Width (in.)	7	9.8	6.56	6.6	9.44	11.3	18.3	10.625	7.1	10.6	13	6.5
Depth (in.)	9	4	4.87	7.9	12.5	12.5	11.2	12.5	9.2	10.7	13.1	6
Weight (lbs.)	6	8.4	4.4	5.5	8.4	19.5	21	17.19	6.4	15	25.4	2

Manufacturer	Model	MFJ 9030	MFJ 9040	MFJ 9420X	MFJ 9440X	MFJ 9475X	SGC* 04-01 SG-2000	SGC* 04-10 POWER-TALK	SGC 05-01/05-04 SG-2020	YAESU FT-100D	YAESU FT-817	YAESU FT-940	YAESU FT-847	YAESU FT-857	YAESU FT-897	YAESU FT-920	YAESU FT-1000D	YAESU FT-1000MP MKV	YAESU MK V FIELD
	Bands	30M	40M	20M	7.15-7.3	75M	HF	HF	HF	HF 6M 2M, 700CM	HF 6M 2M, 700CM	HF	HF 6M 2M, 700CM	HF 6M 2M, 700CM	HF 6M 2M, 700CM	HF 6M	HF	HF	HF
	Rx Range (MHz)	10.1-10.15	7-7.15	14.15-14.35	7.15-7.3	3.75-4	5-30	5-30	1.8-29.7	HF 6M 2M, 700CM	HF 6M 2M, 700CM	1-30	1-30 36-76	1-56, 76-108	1-56, 76-108	1-30	1-30	1-30	1-30
	Power (SSB/CW/FM)	5W CW	5W CW	12W SSB	12W SSB	12W SSB	150W SSB/CW	150W SSB/CW	0-20W SSB/CW	100W HF 6M 50W 2M 20W 700CM	5W	100W <sup>(1)</sup>	5-100W HF 6M 50W 2M 700CM	100W HF 50W 2M 20W 700CM	100W HF 6M 50W 2M 20W 700CM	10-100W <sup>(2)</sup>	20-200W	200W	100W
	Power (AM)	No	No	No	No	No	40W	40W	No	25W HF 6M 12.5W 2M 12.5W 700CM 5W 700CM	1.5W	25W	25W HF 6M 12.5W 2M 12.5W 700CM	25W HF 6M 12.5W 2M 5W 700CM	25W HF 6M 12.5W 2M 5W 700CM	2.5-25W	50W	50W	25W
DSP	Tuner	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes
Keyer		No	No	No	No	No	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Speech Readout		No	No	No	No	No	No	No	No	No	No	No	Optional	No	No	No	No	No	No
Vox		No	No	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Power Requirements		120VAC 1.2A	120VAC 1.2A	120VAC 1.2A	120VAC 1.2A	120VAC 1.2A	120VAC 30A	120VAC 30A	120VAC 5A	13.8VDC 22A	12VDC 22A	13.8VDC 22A	13.8VDC 22A	12VDC 22A	13.8VDC 22A	13.8VDC 22A	125VAC	FP29 30V (supplied)	125VAC 13.8VDC
Antenna ports		1	1	1	1	1	1	1	1	2 <sup>(3)</sup>	2	1	4 <sup>(4)</sup>	2	2	2	1	2	2
Computer Port		No	No	No	No	No	Optional	Optional	Optional	Optional	Optional	Optional	RS-232	Optional	Optional	Optional	Optional	Optional	Optional
Height (in.)		25	25	25	25	25	4.6	4.6	2.75	15	37	34	34	2	234	53	5.9	5.4	5.3
Width (in.)		6.5	6.5	6.5	6.5	6.5	10	10	6	53	94	102	102	61	79	161	164	164	16
Depth (in.)		6	6	6	6	6	15	15	7.25	8	6.5	9.6	10.6	9.2	10.3	12.4	14.8	13.9	13.7
Weight (lbs.)		2	2	2	2	2	12	12	2.5	6.6	2.6	12	14.4	4.6	8.6	30.8	51	31	33

\*Removable control head

(5) Port per band. HF/6M can be combined

(6) Cell blocked

(7) No FM

(8) On internal batteries: 20W (10W on 70cm)

(9) On internal batteries: 5W (2.5W on 70cm)

(b) (5) DPP, (b) (5) ACP

**FREE ITEMS included with some radios.**

**See Price Guide for details.**





## SINGLE BAND MOBILE RADIOS

The AR-147+, 247 and 447 include features expected in a modern mobile including AM air receive (147+ only), direct frequency entry, lots of memory channels and more. Both CTCSS and DCS to ensure compatibility with all repeater systems. • MARS/CAP capable • 80 multi-function memories plus call • Auto repeater offset • 9 DTMF autodialer memories • redialer • Programmable band, memory scan and frequency/channel display • DTMF paging • Dual frequency watch • PC programmable

**AR-147+** 2M Mobile Transmit: 144-148MHz • Receive: 118-171MHz • Three power settings (60, 10, 5W) • 1.5" x 5.5" x 6.25", 2.7lbs ..... **\$149.99**

**AR-247** 220MHz Mobile Transmit: 222-225MHz • Receive: 216-229MHz • Three power settings (30, 10, 5W) • 1.5" x 5.5" x 6.25", 2.7lbs ..... **\$209.99**

**AR-447** 70 Centimeter Mobile Transmit: 430-450MHz • Receive: 420-460MHz • 3 power settings (35, 10, 5W) • 1.5" x 5.5" x 6.25", 2.7lbs. **\$209.99**

### Available Accessories:

MTGBKT Mobile bracket, PROG47 PC programming software and cable, PWRCORD DC cable

**ALINCO**  
AMATEUR RADIO'S VALUE LEADER™



## SINGLE BAND MOBILES

**DR-M06TH** 6M FM Transceiver Covers 50-54MHz • FM, selectable 20/1W output • 100 memories plus CALL channel • 50 tone CTCSS encoder • Programmable repeater offset for each memory channel • Time-out-timer • 13.8V DC @ 3A • 5.5" w x 1.5" h x 4.5" d, 1.6 lbs • Includes DTMF hand mic **\$259.99**

### Available Accessories:

HK130 Hardware kit, MB130 Mounting bracket, PC15B DC cable

**FREE ITEMS** included with some radios.  
See Price Guide for details.



**DR-135TP** 2M Mobile/Base Voice/Data Transceiver 144-148MHz tx; 118-135.995MHz (AM aircraft), 136-173.995MHz rx • 50/10/5W • Wide or narrow FM • 1200/9600bps TNC • 100 alphanumeric memories • 7-character, 3-mode display • CTCSS/DCS, 4 Euro bursts • Backlit DTMF mic • 10 autodial memories • Multi scan modes • Front panel GPS input • Rear PC connection • Ignition key on/off • Theft alarm • 13.8V DC @ 11A • 5.58" w x 1.57" h x 6.83" d, 2.3 lbs.. **C/O \$269.99**

**DR-135TPMKII** Same as 135TP with addition of ± 2.5ppm crystal and new digital board.. **\$269.99**

**DR-135TMKII** Same as 135T with addition of ± 2.5ppm crystal and new digital board..... **\$169.99**

**DR-235T** 135T, but covers 222-224.995MHz tx, 216-279.995MHz rx • 25W/10/5W. **C/O \$249.99**

**DR-435T** Same as DR-135T, but covers 430-450MHz tx, 400-470MHz rx • 35W ..... **C/O \$259.99**

**DR-435TMKII** Same as 435T with addition of ± 2.5ppm crystal and new digital board..... **\$269.99**

### Available Accessories:

EDC37 DC cable, EDC43 Cigarette lighter cable, EJ40U Digital board (T's and TP's only), EJ41U 1200/9600 TNC (T's and TMKII's only), EJ47U Digital board (MKII's only), ERW4 PC cable for 235T, 435T), HK130 Hardware kit, MB130 Mounting bracket, PC15B DC cable, SW620 Windows programming software



## DUAL BAND MOBILES

**DR-620T** Twin Band Mobile Operates on 2M and 70cm. 144-147.995, 430-449.995MHz transmit, and 108-173.995, 335-480, 87.5-108MHz receive. AM Aircraft band reception and MARS modifiable. VHF/UHF operation includes V/U, V/V and U/U (Not capable of full-duplex V/U, V/V, U/U operation). • 200 memories • 50/10/5W VHF, 35/10/5W UHF • Built-in duplexer • Large, alphanumeric, selectable color display • Removable control head can be remote mounted or allow transceiver to be inverted • Optional 1200/9600 bps packet • Direct GPS input for APRS mobile tracking (optional) • Digital voice (optional) • Illuminated DTMF mic allows direct VFO frequency entry and remote control • CTCSS/DCS encode/decode (4 tone bursts) • Programmable VFO and memory scan including timed, busy and skip modes • Time-out timer • Busy-channel lock out • Temperature-compensated crystal oscillator • Ignition key power on/off feature • Power supply voltage display • Theft alarm • 5.5" w x 1.6" h x 7.3" d, 2.2 lbs..... **\$339.99**

### Available Accessories:

EDC39 Separation kit, EJ47U Digital board, EJ50U TNC unit, HK130 Hardware kit, MB130 Mounting bracket, PC15B DC cable, SW620 Windows programming software



**DR-605TQ** FM Dualbander 144-147.995MHz, 430-449.995MHz tx; 136-173.995MHz, 420-470MHz rx • 50/10/5W (VHF), 35/10/5W (UHF) • 50 memories, 1 call per band • Cross band repeat, full duplex • Dual VHF/UHF only displays • Multi scan functions • CTCSS encode, 3 European tone bursts • Twin volume controls • Packet compatible • Cable cloning • Internal antenna duplexer • 13.8V DC @ 11.5A • 5.58" w x 1.57" h x 6.8" d, 2.4lbs.. **\$339.99**

### Available Accessories:

EDS8 EMS14-DR605 adapter, EMS14 Desk top mic, HK130 Hardware kit, MB130 Mounting bracket, PC15B DC cable



## SINGLE BAND MOBILE

**IC-2100H-25N** Rugged 2M Transceiver Icom's best performer against IMD. Straight-forward operation • 50/10/5W • 144-148MHz transmit • 136-174MHz receive • One-touch button operation • 113 memories • Dual, alphanumeric, selectable green/amber backlit display • Backlit TTP mic with 2 programmable keys • One-piece, diecast aluminum chassis • Adjustable attenuator • CTCSS tone enc/decode (50 tones) • Tone scan • Auto repeater with busy lockout • Priority watch • Cloning capability • Mounting bracket • Built to military spec for shock and vibration • Requires 13.8V DC @ 12A • 5.5" w x 1.6" h x 7.1" d, 2 lbs., 10 oz ..... **\$169.99**

### Available Accessories:

BC96 Microphone holder, CSW2100 Windows software and cable, CS2100 DOS cloning software, EX1759 Infrared receiver, HM133S Extra touch-tone mic, HM90A Wireless microphone, MB17A Quick release bracket, MB28H Mobile bracket, OPC346 9.8" DC cable, OPC347 23" DC power cable, OPC440 16.4" mic extension cable, OPC441 Speaker extension cable, OPC474 Radio-to-radio cloning cable, OPC478 PC cable, OPC589 8-pin mic jack adapter cable, OPC647 8.2" microphone extension cable, SP10 Slim-line external spkr

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**& Check Out AES' Latest Additions.**



# ICOM



**IC-V8000** 2M FM Transceiver 75W output power – a first! • TX 144-148, RX 136-174MHz • 207 alphanumeric memory channels including 1 call channel, 6 scan edges • Weather alert and weather channel scan • DMS scan system • Each memory channel stores a 6 character name, tone frequency, skip info, and more • Priority watch • CTCSS/DTCS • Dynamic Memory Scan, customize/manage memory banks • DTMF encode and pager function capability • 10 DTMF memory channels with up to 24 digit DTMF codes • Versatile cloning from transceiver to transceiver or PC to transceiver • Front mounted speaker • One-piece, die-cast, rugged, aluminum chassis • Large cooling fan on the back and large cooling fins • Selectable green or amber display • Includes HM-133V remote control microphone • 5.9" w x 2.1" h x 5.9" d, 2.22 lbs. .... **\$199.99**

#### Available Accessories:

CSV8000 Windows software, OPC1132 9.8' DC cable, OPC347 23' DC cable, OPC440 16.4' mic extension cable, OPC441 Speaker extension cable, OPC474 Radio-to-radio cloning cable, OPC478 PC cable, OPC478U PC USB cable, OPC589 8-pin mic jack adapter cable, OPC647 8.2' mic extension cable, SP10 Slim-line external speaker, UT108 DTMF decoder unit, V8000MMB Mobile bracket



**IC-2720M** 2M/70cm FM Transceiver Provides VHF/VHF, UHF/UHF simultaneous receive capability along with VHF/ UHF full duplex. • Wide/narrow channel spacing • 144-148, 430-450MHz tx • Extra wideband (cell blocked) receive 118-550MHz (left), 118-174, 375-550, 810-999MHz (right) • Weather, WX alert, and Air bands • 212 memories (10 banks), 2 call and 10 scan edges • Auto repeater function • 50/35W (2M/70cm) • Full function, backlit remote control mic with "hot keys" • Wide viewing angle • Independent controls for each band • 12 DTMF memories • User-selectable amber/ green display, adjustable brightness • CTCSS/DTCS enc/ decode with tone scan and pocket beep • Dynamic memory scan • Control head and main unit mic jacks • 1200/9600 bps 6-pin terminal • PC programmable (optional software and cable) • 11.5' separation cable included • 13.8V DC @ 12A • 5.5" w x 2" h x 1.1" d, 5.29 oz. (head), 5.5" w x 1.6" h x 7.4" d, 3.08 lbs. (main) ..... **\$379.99**

#### Available Accessories:

CS2720 Windows/DOS cloning software, MB17A Quick release bracket, MB65 Mounting base platform, MB84 Remote controller bracket, MB85 Combination bracket, OPC1132 9.8' DC cable, OPC1156 11.5' separation cable, OPC347 23' DC power cable, OPC440 16.4' mic extension cable, OPC441 Speaker extension cable, OPC474 Radio-to-radio cloning software, OPC478 PC RS232C cable, OPC478U PC USB cable, OPC589 8-pin mic jack adapter cable, OPC647 8.2' mic extension cable, SP10 Slim-line external speaker



**TM-331A** 220MHz FM Mobile Transceiver Rugged and compact with features that guarantee reliable performance. Covers 222-225MHz transmit and receive • 25/10/SW • Easy-to-read, illuminated keys plus large LCD • 20 multi-function memory channels plus call channel • Multi-scan capability • Tone alert with elapsed time indicator • Page function • CTCSS tone encoder • Time-out timer • Lock function • Auto repeater offset • Repeater reverse switch • Multi-function mic supplied • 13.8V DC @ 6.5A • 5.5" w x 1.5" h x 6.3" d, 2.5 lbs. .... **\$499.99**

#### Available Accessories:

KQT8 CTCSS decoder, MB201 Mobile brkrt, PG2N DC cable, SP50B External mobile speaker

**FREE ITEMS** included with some radios.  
See Price Guide for details.



**TM-541A** 1200MHz FM Mobile Transceiver Extremely compact and lightweight, perfect for mobile installation. Enhanced night-time operation with its illuminated keys, large LCD, and backlit microphone with DTMF. Covers 1240-1300MHz transmit and receive • 10W RF power output • Easy-to-read, easy to operate illuminated keys plus large LCD display • 20 multi-function memory channels plus call channel • Built-in CTCSS tone encoder • ALT (Automatic Lock Tuning) • Tone alert system with elapsed time indicator • DTSS (Dual Tone Squelch System) • Pager function • Auto-power off • Time-out timer • Multi-scan function • Programmable call • Programmable VFO • Offset and repeater reverse switches • Multi-function backlit DTMF microphone supplied • 13.8V DC @ <6A • 5.5" w x 1.5" h x 6.3" d, 2.4 lbs. .... **\$449.99**

#### Available Accessories:

KQT8 CTCSS decoder, MB201 Mobile bracket, PG2N DC cable, SP50B External mobile speaker

# KENWOOD



## SINGLE BAND FM MOBILE TRANSCEIVERS

Fully loaded with features and built to demanding MIL-STD specifications. Supremely user-friendly. • High RF output • 61 multi-function memory channels plus 1 call channel • Memory (MN) function with 6-digit alphanumeric display • DTSS selective calling • Multi-scan capability • Dual menu system • Multi-function microphone with backlit keys • DTMF memory function • Built-in CTCSS tone encoder (optional decoder) • Tone scan • Wireless cloning function • Repeater reverse switch • Lock function • Busy channel lock out • Auto power-off • Time-out timer • 13.8V DC @ <11A • 5.5" w x 1.5" h x 6.3" d, 2.2 lbs.

**TM-261A** 2M (pictured) 144-148MHz transmit; 118-174MHz receive • AM Airband receive • 50/10/SW • Auto repeater offset ..... **\$149.99**

**TM-461A** 440MHz 438-450MHz transmit; 400-470 MHz receive • 35/10/SW • Looks similar to TM-261A except for frequency display ..... **\$439.99**

#### Available Accessories:

MB201 Mobile brkrt, MJ88 Modular/8-pin adapter, PG2N DC cable, SP50B External mobile spkr, TSU8 CTCSS decoder



## DUAL BAND MOBILES

**IC-208H** 2M/440 Dualband Mobile More power, wider receive, lots of memory! Powerful 55/50W (2M/440) output • 118-173, 230-549, 810-999MHz (cell blocked) wide band receive • Weather channel and alert • 500 6-character alphanumeric memory channels • Improved Dynamic Memory Scan (10 banks, 2-100 channels per bank) • New bank listing allows selection of banks you want to scan • Built-in CTCSS/DTCS tone squelch • Operate with control head attached or remote mounted with included cable • Pocket beep and tone scan • 16 DTMF memories • 9600bps data connector • Auto repeater function • Multicolor display lighting and backlit buttons • Remote control microphone included • 5.56" w x 1.56" h x 7.31" d, 2.65 lbs. .... **\$329.99**

#### Available Accessories:

CS208 Windows cloning software, MB17A Quick release bracket, MB88 Remote controller bracket, MB65 Mounting base platform, OPC1132 9.8' DC cable, OPC347 23' DC power cable, OPC440 16.4' mic extension cable, OPC441 Speaker extension cable, OPC474 Radio-to-radio cloning cable, OPC478 PC RS232C cable, OPC478U PC USB cable, OPC589 8-pin mic jack adapter cable, OPC601 23' separation kit, OPC647 8.2' mic extension cable, SP10 Slim-line external speaker

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## DUAL BAND UHF/VHF MOBILES

High performance mobiles that receive three bands simultaneously (with optional band unit) with triple display. Available detachable front panel and wireless remote control functions (external DTMF signal) add versatility. • Selectable frequency step • Built-in DTSS selective calling with page • 101 memories/memory bank system • Flexible scan and scan stop modes • Tone alert with elapsed time indicator • Triple repeater functions • S-meter squelch • Separate antenna and speaker terminals, squelch and volume control per band • Automatic band change • Sub-band muting • Date/time display, stopwatch, alarm • On/Off and time-out timers • 13.8V DC @ <11A • 5.9" w x 1.5" h x 6.8" d, 3.3 lbs.

**TM-642AD** 2M/220MHz (pictured) 144-148MHz transmit/118-174MHz receive and 222-225MHz transmit/215-235MHz receive • 50/10W (2m); 25/10W (220MHz)..... **\$739.99**

**TM-742AD** 2M/440MHz 144-148MHz tx/118-174MHz rx and 438-450MHz tx/410-438MHz rx • 50/10W (2m); 35/10W (440MHz) • Looks like TM-642AD except frequency display ..... **\$639.99**

### Available Accessories:

DFK3 9' separation display cable kit, DFK4 13' remote cable kit, DFK7 Deluxe 22' remote kit, MJ88 Modular/8-pin adapter, PG2N DC cable, SP50B External mobile spkr, TSU7 CTCSS decoder unit, UT1200 10W 1.2GHz unit, UT2205 25W 220MHz unit (for TM-742AD only), UT4405 35W 440MHz unit (for TM-642AD only), UT505 50W 6M unit



**TM-G707A** 144/440MHz FM Dual Bander Extra-ordinarily user-friendly with extra-large detachable control panel. 144-148, 430-450MHz transmit; 118-174, 410-524MHz receive • 50/10/5W (VHF); 35/10/5W (UHF) • Detachable control panel with high-visibility amber LCD display • 180 multi-function alphanumeric memories • Multi-scan functions • Priority scan function • Built-in CTCSS encoder and decoder • 1200/9600bps packet ready • Cross band repeater access • Selectable frequency step • S-meter squelch • Time-out timer • Dimmer control • Auto power-off • Multi-function backlit microphone with DTMF • 13.8VDC @ 11A • 5.5" w x 1.5" h x 7.4" d, 2.7 lbs..... **\$269.99**

### Available Accessories:

DFK3C 9' cable kit, DFK4C 13' cable kit, DFK7C Deluxe 23' remote kit, MB201 Mobile bracket, MJ88 Modular/8-pin adapter, PG2N DC cable, PG45 PC interface cable, PG5A Packet data cable, SP50B External mobile speaker, VS3 Voice synthesizer

**TM-D700A** 144/440MHz Dual Band Data Communicator Fully equipped to complement SSTV, GPS and APRS\*. 144-148, 430-450MHz transmit • 118-148, 136-175, 300-524, 800-1300MHz wide band receive (cell blocked) • 50/10/5W (VHF); 35/10/5W (UHF) • Detachable control panel with extra-large backlit LCD and multi-function key display • Backlit microphone with alphanumeric input • Easy-to-use menu system • Advanced APRS-99 features • Built-in 1200/ 9600 bps TNC (AX.25) • DX cluster monitoring • Dual receive on same band for voice and data • 200 alphanumeric memories • 2 call channels • 10 programmable memory scan banks • Built-in CTCSS and 1750 tone burst • Digital Code Squelch (DCS) • DTMF memory • Cross band and fixed band repeater operation • DCS code scan, tone, CTCSS scan • 10-channel program scan • Visual band scope • 13.8VDC @ 11.5A • 5.5" w x 2.4" h x 1.2" d, 0.4 lbs. (control), 5.5" w x 1.2" h x 7" d, 2.6 lbs. (main)..... **\$519.99**

### Available Accessories:

MB201 Mobile bracket, MJ88 Modular/8-pin adapter, PG2N DC cable, PG4X 13' extension cable kit, PG5A Packet data cable, SP50B External mobile spkr, VS3 Voice synthesizer



**TM-V7A** 144/440MHz FM Dual Bander Easy-to-operate control panel with dual-mode, cool-blue, reversible LCD, offering positive and negative displays. Use with a PC, GPS, packet TNC or operate APRS position reporting and message system locally or nationally. Transmit: 144-148, 430-450MHz; receive: 118-174, 410-470MHz • 50/10/5W (VHF); 35/10/5W (UHF) • Data connector and separate automatic digital channel for APRS\* • Detachable control panel • Dual receive on same band • Up to 280 multi-function memory channels (180 with 7-character alphanumeric) • Multi-scan functions • DTSS selective calling with page function • Built-in CTCSS enc/decoder • 1200/9600bps packet ready • Friendly operating menu • Automatic band change • Selectable frequency steps • S-meter squelch • Time-out timer • Audible frequency ID • Auto repeater offset (144MHz) • Auto power-off • Backlit multi-function mic with DTMF • 13.8VDC @ 10A • 5.5" w x 1.5" h x 7.4" d, 2.7 lbs .... **\$399.99**

### Available Accessories:

DFK3C 9' cable kit, DFK4C 13' cable kit, DFK7C Deluxe 23' remote kit, MB201 Mobile bracket, MJ88 Modular/8-pin adapter, PG2N DC cable, PG45 PC interface cable, PG5A Packet data cable, SP50B External mobile speaker, VS3 Voice synthesizer



## LOW POWER SINGLE BAND SSB MOBILE TRANSCEIVERS

Easy to operate, no microprocessor - turn on and tune in. • 20W PEP (Less on VHF models) - plus Constant Current™ syllabic speech processing for an added 4-6dB advantage to cut through noise • Includes handheld dynamic microphone • 3A from 12V supply or battery • Low noise preamp and active double balanced mixer front end • Sharp 2.3kHz SSB crystal ladder filter reduces passband noise and fights QRM • TVI protection • Real S-meter • Agile tuning - reduction drive analog VFO - scan band quickly, zero in smoothly • Amp jack • 2.5" h x 6.5" w x 6" d, 2 lbs.

**9402X** 2M SSB Adventure Radio™, 7W .. **\$269.99**

**9406X** 6M SSB Adventure Radio™, 10W **\$249.99**

**9410X** 10M 20W Adventure Radio™..... **\$239.99**

### Available Accessories:

1770A 10M dipole for 9410X, 4110 Portable AC power supply, 4114 Rechargeable power pack, 416 CW adapter, 971 200W HF tuner (9410X only)



## VHF DATA RADIOS

Don't tie up your expensive rig on a single packet channel, check out these low-cost MFJ Data Radios.

**8621** PacketOnly™ 2m Transceiver Compatible with all TNCs with hardware DCDs and most TNCs with software DCDs • 1200/9600 baud • 5W output • Low current drain (15mA on receive and less than 1 amp on transmit) • 5" w x 5" d x 1.5" h • Crystals installed for 145.01MHz ..... **\$139.99**

**8621X2** PacketOnly™ 2m Transceiver Ready for APRS use. • Crystalled and aligned for 144.390MHz • 5W output ..... **\$149.99**

### Available Accessories:

4110 Portable AC power supply, 5100 Data radio cable (MFJ/TAPR), 5100YH Data radio cable (KPC9612), 5100YV Data radio cable (KAM/KPC3), 5106 Open end (6-pin mini Kenwood/Yaesu)

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**



**www.aesham.com**



# Real Performance for the Real World!

Today's elite-class operators demand the best RF weaponry available. Yaesu's exciting new MARK-V FT-1000MP answers the call, with an expanded array of receiver filtering, 200 Watts of power output, and Class-A SSB operation capability for the cleanest signal on the band. Enhanced front-panel ergonomics on the front panel save you seconds in a pile-up or a contest "run," and Yaesu's HF design and manufacturing know-how ensures that no short-cuts have been taken in our effort to bring you the best HF transceiver money can buy. For more QSOs in your log, and more awards on your wall, there is only one choice: the MARK-V FT-1000MP from Yaesu!

**I. Interlocked Digital Bandwidth Tracking System (IDBT)**

**II. Variable RF Front-End Filter (VRF)**

**III. 200 Watts of Transmitter Power Output**

**IV. Class-A SSB Operation**

**V. Multi-Function Shuttle Jog Tuning/Control Ring**

## Features

■ Frequency Coverage: (RX) 100 kHz-30 MHz; (TX) 160-10 m Amateur Bands ■ Dual In-band Receive w/Separate "S" Meters ■ Ten Pole Collins® Mechanical Filter Built-in ■ RX DSP Noise Reduction and CW Peaking Filter ■ High-speed Automatic Antenna Tuner ■ Two TX/RX Antenna Jacks plus RX-only Jack ■ TX Microphone Equalizer ■ RF Speech Processor ■ Direct Digital Synthesis ■ CW Spot and Two Key Jacks ■ Two Headphone Jacks (1/4" and 3.5 mm) ■ Low-Level Transverter RF Drive Jack ■ Separate FP-29 Power Supply (30 V/13.8 V DC Output)



HF 200 W All-Mode Transceiver

**MARK-V** FT-1000MP



## For Elite-Class Amateur Radio Operators...

A NEW BREAKTHROUGH IN TRANSMITTED AUDIO QUALITY: THE YAESU MD-200A8X HIGH-FIDELITY DESKTOP MICROPHONE.

- New-Technology Polyethylene Terephthalate Film High-Fidelity Dynamic Microphone Element
- Vibration-Resistant Housing
- VSPC (Variable Side Pressure Control) Technique (Patent Pending)
- Ease of Operation through Ergonomic Design
- Provision for User-Supplied Additional Microphone Element



VSPC (Variable Side Pressure Control)

Ultra-High-Fidelity Desktop Microphone

**MD-200A8X**

## APPLICABLE TRANSCEIVERS

MARK-V FT-1000MP,  
FT-1000MP, FT-1000/-1000D\*,  
FT-990\*, FT-920, FT-900,  
FT-847, FT-840\*, FT-817

\* The FT-1000/-1000D/-990/-840 do not support the illumination of the TX LED during transmission.

## Expand Your DX Horizons With The FTV-1000 50 MHz Transverter!

- 50 MHz Transverter with 200 W PEP Power Output
- Class-A Bias Selection for Low TX IMD (PO: 50 W)
- High-Performance Receiver Front End
- Automatic, Effortless Operation with MARK-V FT-1000MP
- Upgrade to High Power with VL-1000 Linear Amplifier



## Specifications

Frequency Range: 50-54 MHz  
Antenna Impedance: 50 Ohms  
Power Output: 200 Watts PEP  
Spurious Emissions: At least 60 dB down  
Power Source: DC 30 V and 13.8 V (supplied by FP-29 Power Supply of MARK-V)  
Dimensions: 9.6" x 5.4" x 13" WHD (243.5 x 136.5 x 331 mm)

200 W 50 MHz Transverter

**FTV-1000**

For the latest Yaesu news, visit us on the Internet:  
<http://www.vxstdusa.com>

Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ in some countries. Check with your local Yaesu Dealer for specific details.

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US Headquarters  
10900 Walker Street  
Cypress, CA 90630 (714)827-7600



# The Ultimate in Dual Band Mobile Operating Ease!

The exciting YAESU FT-8800R Dual Band Mobile is the rig you've asked for, and it's available now! With a powerful 50 Watts of 2-meter power output (70 cm: 35 W), wide receive coverage, 800+ memory channels with 10 memory groups, independent two-channel operation (V/V, U/U, V/U), optional remote-head mounting kit, and cross-band repeater capability, the FT-8800R is packed with the features you demand, at a price you'll enjoy. And its superb ergonomics and creative firmware design make the FT-8800R the easiest Dual Bander to operate while driving!

## 144/430 MHz DUAL BAND



29/50/144/430 MHz  
QUAD BAND



29/50/144/430 MHz Quad Band FM Mobile

ACTUAL SIZE  
\*Simulated LCD display

### FT-8800R

144/430 MHz FM DUAL BAND  
TRANSCIVER

**YAESU**  
Choosers of the World's top 100 comp

Vertex Standard  
US Headquarters  
10900 Walker Street  
Cypress, CA 90630 (714)827-7600

For the latest Yaesu news, visit us on the Internet:  
<http://www.vxstdusa.com>

Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ in some countries. Check with your local Yaesu Dealer for specific details.



# NO COOLING FAN COOL AND QUIET 65 W OPERATION

Yaesu's FT-2800M, the most ruggedly-built 2-meter amateur transceiver ever, provides 65 Watts of power along with YAESU's renowned bullet-proof receiver front end. Direct keypad frequency entry, Alpha-Numeric Memory System, the high power output, and unsurpassed ergonomics make the FT-2800M an operator's dream come true!

High power output, a huge, easy-to-read display, and one-touch WIRES™ Internet Linking Access capability are yours with the exciting new FT-2800M.

On transmit, the 65 Watts of true FM power output provides you with excellent coverage and superb voice clarity. On receive, you get extended coverage of 134-174 MHz, with a special memory bank dedicated to the NOAA Weather Broadcast Channels (U.S. version only).

Built to the exacting requirements of both the commercial radio industry, as well as the U.S. military's MIL-STD 810, the FT-2800M is constructed using an aluminum diecast chassis/heatsink assembly, providing outstanding mechanical and thermal stability for the internal components.

With superb ergonomics to go along with its stout RF design, the FT-2800M is ready for action, at home or away!

## New Ultra-High-Dissipation Heat Sink Design

The all-new heat sink of the FT-2800M provides more effective cooling than any other design, allowing long transmission periods without dangerous heat build-up or power reduction due to thermal protection.



HEAVY-DUTY VHF FM TRANSCEIVER

## FT-2800M

ACTUAL SIZE

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<http://www.vxstdusa.com>

Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ at some locations. Check with your local Yaesu Dealer for specific details. Specifications guaranteed only in 2-meter Amateur band.

**YAESU**  
Since 1957, the World's Top RF Corp.  
Vertex Standard  
US Headquarters  
10900 Walker Street  
Cypress, CA 90630 (714)827-7600



# HF EXCITEMENT

## INTRODUCING YAESU'S ALL NEW HF MOBILE

Blending leading-edge technologies developed on the FT-897 and MARK-VFT-1000MP transceivers, the FT-857 is the world's smallest\* HF/VHF/UHF Multimode Transceiver, and it's available now!

\*Jan. 2003

### FT-857 DESIGN HIGHLIGHTS

The FT-857 is a high-performance, ultra-compact transceiver operating on the 160-10 meter HF bands, plus the 50, 144, and 430 MHz VHF/UHF bands. Providing 100 Watts of power on HF/6 meters, 50 Watts on 2 meters, and 20 Watts on 70 cm, the FT-857 is ideal for mobile, vacation, DX-pedition, or home use when space is at a premium.

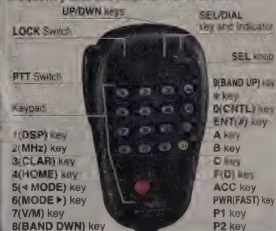
Utilizing the renowned receiver performance of the FT-897 and MARK-VFT-1000MP, the FT-857 features wide dynamic range, optional Digital Signal Processing, and outstanding audio.

The wide array of convenience features includes a 32-color display; Spectrum Scope; built-in keyer with memory and beacon mode; U.S. Weather Band reception; 200 memories with Alpha-Numeric labels; AM Aircraft reception; detachable front panel (optional YSK-857 required); and much, much more.

You've asked for it, and it's here today: the FT-857 New Mobile... from the engineers at Yaesu!

### New Remote Control DTMF Microphone MH-59AsJ (Option)

The optional MH-59AsJ Remote Microphone provides control of the major functions of the FT-857 from the microphone's keypad. The MH-59AsJ includes a rotary control knob for adjusting the operating frequency and the receiver volume level.



Actual Size

# HF EXCITEMENT

## FT-857

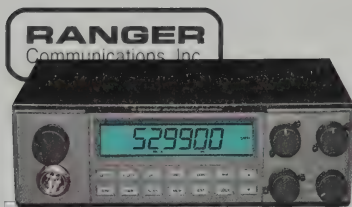
ULTRA-COMPACT HF/VHF/UHF  
100 W\* ALL-MODE TRANSCEIVER  
(HF/6 m 100 W, 2 m 50 W, 70 cm 20 W)

For the latest Yaesu news, visit us on the Internet:  
<http://www.vxstdusa.com>

Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ in some countries. Check with your local Yaesu Dealer for specific details.

**YAESU**  
*Choice of the World's top DXers*  
Vertex Standard  
US Headquarters  
10900 Walker Street  
Cypress, CA 90630 (714)827-7600





## SINGLE BAND 6M MOBILE

**RCI-5054DX** All-Mode 6M Transceiver Covers 50-54MHz • 10W CW/AM/FM, 25W PEP SSB • 10 programmable memory frequencies • Programmable repeater offset (splits of up to 2MHz) •  $\pm$  2.5kHz receiver clarifier • Noise blanker/ANL circuitry • Programmable receiver scanning for quick search of active frequencies • Includes Up/Down tuning hand microphone • 12V DC • Public address feature • 2.4" h x 7.75" w x 10.75" d ..... **\$269.99**

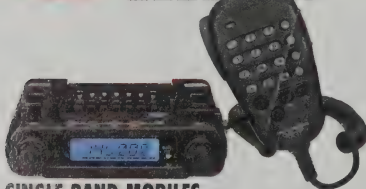


## DUAL BAND MOBILES

**RCI-2950DX** 10/12M Transceiver An old favorite updated with 12M, improved receiver, double FET balanced mixer, surface mount components and improved display lighting. Covers 24.8-24.99, 28-29.7MHz • 25W (SSB), 12W (CW), 10W (AM/FM) • Dual VFO • RIT • Noise blanker • Standard repeater offsets • Programmable tone • Scanning • 10 programmable frequencies • Lockout ..... **\$269.99**

**RCI-2970DX** Higher power version. 150W (SSB PEP), 50W (CW/FM/AM) ..... **\$399.99**

**YAESU**



## SINGLE BAND MOBILES

**FT-1500M** 2M FM Transceiver Transmit: 144-148MHz, receive: 134-174MHz • 10 NOAA weather channels with "Weather Search" • 50/25/10/SW • Alphanumeric channel display • 130 multi-function memories with 6-character, alphanumeric labels • SmartSearch™ automatic memory loading • Priority channel • 16-digit, 8 memory DTMF autodialer • 50-tone CTCSS enc/decode • Bell alert CTCSS paging • Auto repeater shift • 1200/9600 baud compatible, rear panel data jack • Time-out timer • Auto power off • DTMF direct access mic • MIL-STD 810 D/E • DC voltage display • 13.8V DC @ 9.5A • 5" w x 1.4" h x 4.9" d, 2.2 lbs ..... **\$159.99**

### Available Accessories:

ADMS2F Programming software, CT39 Packet cable, MLS100 Mobile speaker, RA0242900 Mobile bracket, SP4 Mobile speaker, T9021810 DC cable



**FT-2800M** 2M FM Transceiver Cool, quiet, and ruggedly-built; utilizes a new ultra-high dissipation heat sink design that eliminates the need for a cooling fan. • 65/25/10/SW (memory storable) • Direct keypad frequency entry with a backlit mic that includes a 9-memory, 16-digit, DTMF autodialer and 4 user-programmable "soft" keys • Advanced track tuning RF input filtering • Huge alphanumeric channel display • Ergonomic, impact-resistant, MIL spec design (MIL-STD 810) • CTCSS encode/decode and SmartSearch™ auto memory loading • Versatile scanning features a choice of scanning-resume option along with a "preferential" list • WX channels with "Severe Weather" alert (10 weather memories) • WIRES™ internet linking access • 6.3" w x 2.0" h x 7.3" d, 4 lbs ..... **\$159.99**

### Available Accessories:

MLS100 Mobile speaker, SP4 Mobile speaker



## MULTI BAND MOBILES

**FT-90R** 2M/440MHz FM Transceiver Micro-sized with built-in cooling fan • TX: (2M) 144-148MHz; (440MHz) 430-450MHz • Wideband rx: 100-230, 300-530, 810-999.975MHz (cell blocked), includes AM aircraft • 50/20/10/SW (2M), 35/20/10/SW (440 MHz) • 186 memories with alphanumeric labels • 5 scanning modes • Built-in CTCSS/DCS enc/dec • ARTS™ • 1200/9600bps compatible • Auto repeater shift • Time-out-timer • Ultra-compact remote-head capability • DTMF direct access mic with user-programmable keys • 8-memory, 16-digit DTMF autodialer • Memory cloning • 13.8V DC @ 9.5A • 3.9" w x 1.2" h x 5.4" d, 1.42 lbs ..... **\$369.99**

### Available Accessories:

ADMS2E Programming software, MLS100 Mobile speaker, RA0131900 Mobile bracket, SP4 Mobile speaker, T9021810 DC cable, YSK90 Remote separation kit



## FT-8800R Dualband FM Mobile Transceiver

With easy operation, outstanding receiver performance, and crossband repeat capability, the 8800R is the new standard of comparison! • 144-148, 430-450MHz transmit • 108-520, 700-999 (cell blocked) wide frequency coverage (keep informed in the public safety, commercial, aircraft, and government ranges) • Independent 2-channel operation – dual receive with one band as the main TX/RX band • Separate volume and squelch controls for each band • Ability to configure 8800R for VHF-VHF or UHF-UHF operation • 50W on 144MHz, 35W on 430MHz • Over 1000 memory channels, 512 "regular" on each band, five "Home," ten sets of band-edge memories on each band, and six "Hyper Memories" (complete sets of transceiver configurations) • Large, easy-to-read OmniGlow™ LCD with 4 illumination levels • Cross-band repeat capability • One-touch band pattern • CTCSS/DCS (50/104 tone) • User-programmable mic keys • Convenient remote-head mounting capability (optional separation kit required) • 5.5" w x 1.6" h x 6.6" d, 2.2 lbs • **\$25 Factory Rebate thru 12/31/03 ..... \$399.99**

## FT-8900R Quad Band FM Mobile National or world-wide FM communications from a vehicle!

• 28-29.7, 50-54, 144-146, 430-440MHz tx • 28-29.7, 50-54, 108-180, 320-480 and 700-985MHz (cell blocked) wide frequency receive • 50W (10/6/2M), 35W (430MHz) high power output • FM satellite operation • Over 800 memories • DTMF auto-dial memory • One-touch band-pattern "Hyper-Memory," allows set up and storage of complete transceiver configuration settings. Saves button pushing! • CTCSS/DCS encode/decode • Smart-Search™ auto memory loading • Cross band repeat • Independent, 2-channel, dual receive and full duplex (separate volume and squelch controls, as well as S-meters) • Built-in duplexer • WIRES™ compatible • RF squelch • Auto repeater shift • ARTS™ capable • User-programmable microphone keys • Easy set up for FM satellite operation • Battery voltage meter • Time-out timer • Automatic power off • Large, easy-to-read LCD display • 1200/9600 bps packet • Thermal-sensored cooling fan • Remote head mounting capability • Looks similar to FT-8800R • 5.5" w x 1.6" h x 6.6" d, 2.2 lbs **\$439.99**

### Available Accessories:

ADMS2H Programming software (8900R), CT39 Packet cable, MLS100 Mobile speaker, MMB60 Quick release mobile mount (8800R), MMB62 Remote control panel bracket (8900R), MMB66 Quick release mobile mounting bracket (8900R), SP4 Mobile speaker, T9021810 DC cable, YSK8900 Remote separation kit

# Look For This

**NEW**

## & Check Out AES' Latest Additions!



**FREE ITEMS included with some radios.**  
**See Price Guide for details.**



Manufacturer	ADI	ADI	ADI	ALINCO	ALINCO	ALINCO	ALINCO	ALINCO	ICOM	ICOM	KENWOOD	KENWOOD	KENWOOD	KFJ
Model	AR-147+	AR-247	AR-447	DR-M06TH	DR-135TKWII, TP, TPKMII	DR-235T	DR-435T, MKII	IC-2100H-25N	IC-V8000	KENWOOD TM-261A	KENWOOD TM-331A	KENWOOD TM-461A	KENWOOD TM-541A	8621
Rx Range (MHz)	14R-148	222-2275	430-450	50-54	14R-148	222-224,995	430-443,995	144-148	144-148	144-148	222-225	438-450	1240-1300	145.01
Tx Range (MHz) <sup>(a)</sup>	11R-171	222-2275	400-470	40-60 <sup>(m)</sup>	11R-174	216-273,995	330-511,995	136-174	136-174	118-174	222-225	400-470	1240-1300	145.01
Aircraft Rx	Yes	N/A	N/A		Yes	No	No	No	No	No	No	Yes	No	
Power Output	60/15/5W	35/10/5W	35/10/5W	20/1W	50/10/5W	25/10/5W	35/10/5W	50/10/5W	75/25/10/5W	50/10/5W	25/10/5W	35/10/5W	10W	5W
TP Microphone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes/DCS	Yes	Yes	Yes	Yes	No
Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes/DCS	Yes	Yes	Yes	Yes	No
Tone Decode	Yes/DCS	Yes/DCS	Yes/DCS	EJ2OU	Yes	Yes	Yes	Yes	Yes/DCS	TSU-8	KQT-8	TSU-8	KQT-8	No
Memories	80	80	80	100	100	100	100	113	207	62	20	62	20	0
Alphanumeric	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No
PC Programmable	Yes	Yes	Yes	N/A	No	No	No	Yes	No	No	No	No	No	No
13 BV DC@	12A	8A	10A	5A	11A	8A	10A	12A	15A	11A	6.5A	10A	6A	>1A
Antenna Conn	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	SQ-239	Type-N	SQ-239	SQ-239
Size (twird, in.)	1.5/5.5/6.5	1.5/5.5/6.5	1.5/5.5/6.5	1.6/5.5/6.9	1.6/5.5/6.9	1.6/5.5/6.9	1.6/5.5/6.9	1.65/5.71	2.0/5.9/6.9	1.6/5.5/6.3	1.7/5.5/6.6	1.7/5.5/6.6	1.6/5.5/6.3	1.5/5/5
Weight (lbs.)	2.65	2.65	2.65	2.3	2.3	2.3	2.3	2.22	2.22	2.22	2.22	2.22	2.4	0.8

(9) Requires internal modification (available on request)  
 (10) There are gaps in non-voice or data portions in certain bands  
 (11) Control head separate from body  
 (12) FT-8900R includes 10M/GM as well  
 (13) Radios are cell blocked

**FREE ITEMS included with some radios.**  
**See Price Guide for details.**

- \* Removable control head
- 1) Requires keyboard modification
- 2) Expanded memory requires optional EJ19U
- 3) 2 Piece configuration only
- 4) 2M/220MHz Transceiver
- 5) All models are Cellular Blocked
- 6) AM aircraft receive mode
- 7) Does not include projections (knobs, antenna jacks, etc.)
- 8) Manufacturer only guarantees specs within the team bands

Manufacturer	MF1	MF2	MF3	MF4	MF5	RANGER	YAESU FT-1500M	YAESU FT-2800M
Model	8621X2	9402X	9408X	9410X		RC1-5054DX		
Rx Range (MHz)	144.39	144-144.3	50-50.3	28.3-28.6		50-54	144-148	144-148
Tx Range (MHz) <sup>10</sup>	144.39	144-144.3	50-50.3	28.3-28.6		50-54	137-174	137-174
Aircraft Rx	No	No	No	No		No	No	No
Power Output	5W	7W SSB	10W SSB	20W SSB		10/25W	50/25/10/5W	65/25/10/5W
TP Microphone	No	No	No	No		No	Yes	Yes
Tone Encode	No	No	No	No		No	Yes	Yes
Tone Decode	No	No	No	No		No	Yes	Yes/DCS
Memories	0	0	0	0		10	130	221
Alphanumeric	No	No	No	No		No	Yes	Yes
PC Programmable	No	No	No	No		No	Yes	No
13.8V DC@	>1A	2A	3A	3A		7A	8A	10A
Antenna Conn	SO-239	SO-239	SO-239	SO-239		SO-239	SO-239	SO-239
Size (h/w/d, in.)	1.5/3/5	2.5/6.5/6	2.5/6.5/6	2.5/6.5/6		2.4/7.5/10/7.5	1.4/5/5	2/6.3/7.3
Weight (lbs.)	0.8	2	2	2		1	2.2	4

## MULTI-BAND MOBILE TRANSCEIVERS

Manufacturer	ALINCO	ALINCO	ICOM	ICOM	ICOM*	KENWOOD*	KENWOOD*	KENWOOD	KENWOOD*	RANGER	RANGER	YAESU	YAESU	YAESU*
Model	DR-620T	DR-620T	IC-208H	IC-2720H	IC-2720H	TM-D700A	TM-G707A	TM-V7A	TM-G4240 <sup>(1)</sup>	RCI-2950DX	RCI-2970DX	FT-8800R	FT-8800R	FT-90R
Tx Range <sup>(3,6)</sup>	430-450	430-450	440-450	430-450	430-450	430-450	430-450	438-450	220-225 438-450	28-29.6999	28-29.6999	144-148 430-450	144-148 430-450	144-148 430-450
Rx Range (MHz) <sup>(3,6)</sup>	136-174 420-470	87.5-108 (WFM) 08-17A 335-480	118-172 <sup>(3)</sup> 220-550 810-999	118-550 (left) 118-174 375-550 810-999 (right)	118-470 (A band) <sup>(3,6)</sup> 136-175 300-524 800-1300 (B band) <sup>(3)</sup>	118-174 410-524 <sup>(6)</sup>	118-174 410-470 <sup>(6)</sup>	118-174 213-235 <sup>(6)</sup>	118-174 410-470 <sup>(6)</sup>	24.8-24.99 28-29.6999	24.8-24.99 28-29.6999	108-520 700-999	28-29.750-54 108-180 300-530 320-480, 700-985	100-230 810-1000
Single or Dual Rx	Dual	Dual	Single	Single	Single	Single	Dual	Dual	Dual	Single	Single	Dual	Dual	Single
Power (2M) <sup>(17)</sup> Power (40MHz)	50/5W 35/10/5W	50/5W 35/10/5W	55/15/5W 50/15/5W	50/20/5W 35/20/5W	50/10/5W 35/10/5W	50/10/5W 35/10/5W	50/10/5W 35/10/5W	50/10/5W 35/10/5W	50/10/5W 35/10/5W	25W SSB 10W CW/FM/AM	150W SSB 50W CW/FM/AM	50W <sup>(3)</sup> 35W	50W <sup>(3)</sup> 35W	50/20/10/5W 35/20/10/5W
Memories	100	200	500	212	200	180	280	101	101	10	Yes	Yes	Yes	186
Tone Encode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tone Decode	Yes	DCS	Yes	DCS	Yes	Yes	Yes	Yes	Opt. TSU-7	No	No	DCS	DCS	DCS
Duplexer	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
Cross-Band Rpt.	Yes	No	No	Yes	Yes	No	No	Yes <sup>(3)</sup>	Yes <sup>(3)</sup>	No	No	Yes	Yes	No
Alphanumeric	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes
PC Programmable	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	TBA	Yes	Yes
960db Compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>(3)</sup>	Yes <sup>(3)</sup>	No	No	Yes	Yes	Yes
Separateable	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Height (in.) (Head)	1.6	5.51	1.6	1.6 (2)	1.6 (2)	1.6	1.6	1.9	1.9	3.875	3.875	1.6	1.6	1.2
Width (in.)	5.5	7.57	5.6	5.5 (5.5)	5.5 (5.5)	5.5	5.5	5.9	5.9	7.75	7.75	5.5	5.5	5.9
Depth (in) <sup>(4)</sup>	6.9	7.28	7.3	7.1 (7.1)	7.1 (7.1)	7.4	7.4	6.9	6.9	10.75	9.25	6.6	6.6	5.4
Weight (lbs)	2.4	2.2	2.7	3 (5.3)	2.6 (6.3)	2.7	2.7	2.7	3.9	4.2	7.4	2.2	2.2	1.4





## POWER SUPPLIES

• 105-125V AC input, 13.8V DC output; internally adjustable from 11-15V • Electronic regulation with fold-back current limiting and crowbar over-voltage protection • Heavy-duty heat sink • 3-wire cord • 1-year warranty • Made in U.S.A.

Separate volt and amp meters on RS-20M, 35M, 50M and 70M. Separate volt and amp meters, plus voltage adjustment (2-15V DC) on VS-20ML, VS-35M and VS-50M. RM-35M, RM-50M and RM-60M are rack mount models, plus separate meters.

Model	Cont. Amps	ICS Amps	Size (in.) H W D	Shipping weight	Price
RS-7A	5	7	3.75 x 6.5 x 9	9	\$59.99
RS-10A	7.5	10	4 x 7.5 x 10.75	11	69.99
RS-12A	9	12	4.5 x 8 x 10.75	13	79.99
RS-20A	16	20	5 x 9 x 10.5	18	99.99
RS-35A	25	35	5 x 11 x 11	27	149.99
RS-35A/220V	Same as RS-35A	but 220V input			169.99
RS-50A	37	50	6 x 13.75 x 12	46	219.99
RS-70A	57	70	6 x 13.75 x 12	48	259.99

With separate Volt & Amp meters

RS-20M	16	20	5 x 9 x 10.5	18	119.99
RS-35M	25	35	5 x 11 x 11	27	169.99
RS-50M	37	50	6 x 13.75 x 11	46	239.99
RS-70M	57	70	6 x 13.75 x 12	48	289.99

Adjustable output; separate Volt & Amp meters

VS-20ML	16	20	5 x 9 x 10.5	20	139.99
VS-35M	25	35	5 x 11 x 11	29	189.99
VS-50M	37	50	6 x 13.75 x 11	46	259.99

Rack mount models; separate Volt & Amp meters

RM-35M	25	35	5.25 x 19 x 12	38	249.99
RM-50M	37	50	5.25 x 19 x 12	50	279.99
RM-60M	50	55	7 x 19 x 12	60	359.99

## POWER SUPPLIES WITH ADDED FEATURES

**RS-4L** Has a built-in cigarette lighter receptacle in the front panel. 13VDC @ 4A peak, 3 Amps continuous. 3.5" h x 6.5" w x 4.25" d, 6 lbs ..... **\$49.99**

**RS-12S** With built-in speaker. Rated 13VDC @ 12A peak, 9A contin. 4.5" h x 8" w x 9" d, 13 lbs **\$89.99**

## SWITCHING POWER SUPPLIES



**SS-25** 12V DC, rated 20A continuous, 25A ICS. 3" h x 7" w x 9.5" d, 4.2 lbs ..... **\$109.99**

**SS-25M** Same as above with volt and amp meters **\$129.99**

**SS-30** 12V DC, rated 25A continuous, 30A ICS, 3.75" h x 7" w x 9.5" d, 4.5 lbs ..... **\$119.99**

**SS-30M** Same with volt/amp meters..... **\$139.99**

## POWER INVERTERS

**12/115** General Purpose Converts 12V DC to 115VAC @ 60Hz. Provides convenient, mobile, AC house current (boat, car, truck, etc.). Powers a ham rig, small household appliance, TV, tools and lights up to 200W continuous (peaks up to 240W, overload protected). Produces square wave output, not recommended for devices where high transients are not tolerable. 4.5" h x 8" w x 9" d, 9 lbs **C/O \$49.99**

**N2412-12** 28V Aircraft Converts 22-32V DC input to 13.8V DC output @ 10 amps. Eliminates tapping into a 28V battery for 12V power **\$49.99**

**N2412-24** Same as above, rated at 20A... **\$79.99**



## SMALL POWER SUPPLIES

**38-384** Light-duty DC Supply (pictured) Input: 115 V AC • Output: 13.8V DC regulated @ 4A • Front panel binding posts • LED indicator, fuse protection • 7.75" d x 4.75" w x 3" h, 5.5 lbs **\$39.99**

**38-305** AC Adapter Provides multiple low-voltage DC to operate various battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12V DC with a max. current rating of 500ma. Multiple application plugs and 9V snaps fit most devices..... **\$9.99**

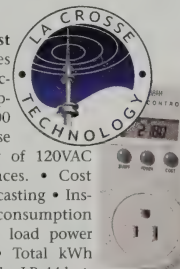
**38-312** Regulated AC Adapter Multi-voltage with multiple plugs and 9V snaps. Selectable 1.5, 3, 4.5, 6, 7.5, 9 or 12V DC regulated with a maximum current rating of 1200ma. to operate a wide range of battery operated devices..... **\$29.99**



**GZV-4000** Switching Mode DC Power Supply with Built-in Speaker 120V AC input • Variable output: 5-15V DC with center detent at 13.5V DC • 40 amps continuous rating, 100% duty cycle • Over temperature, overload, short-circuit protection with current foldback at approximately 42 amps • Overload indicator • Selectable monitoring of voltage and current • DC terminals on rear • Cigarette lighter jack on front • Filtered AC line • 8.25" x 13" x 4.5", 8 lbs ..... **\$179.99**

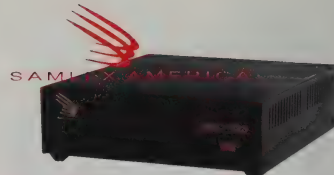
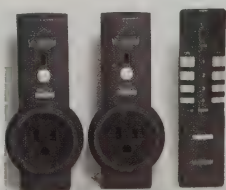
## 3362U Power Cost

Controller Provides monitoring of electricity consumption. Approximately 3W to 1800 W range, ideal for use with a large variety of 120VAC 60Hz (15A) appliances. • Cost monitoring and forecasting • Instantaneous power consumption (Watts) • Maximum load power (maximum Watts) • Total kWh consumption • Includes LR-44 button cell ..... **\$29.99**



## RS-204U

Remote Control Outlet System Control multiple outlets by remote control. Units plug into existing outlet to turn on/off lamps, tools, appliances, etc. - up to 20A. Operates up to 80', even through walls. Includes remote and 2 outlets. Uses 2 AAA batteries (not included)..... **\$29.99**



**SEC-1223** Low Cost, Base Station Power Supply for HF, UHF & VHF Transceivers Switching mode design • 23 Amp rating • Current limiting • Short circuit protection • Overvoltage protection • Anodized black chassis and powder coat wrinkle black steel cover • Input: 110-120VAC, 200-240VAC • 4.9A input current • 13.8VDC output voltage • 23 Amps output current (24 Amps maximum) • 3-year warranty • 7.2" x 8.7" x 2.2", 3.3 lbs ..... **\$99.99**



## COMPACT INVERTERS

**PowerVerter® Ultra** These low cost, DC-AC inverters provide access to AC power anywhere. Harnessing auto, boat, RV or service truck 12V power through a cigarette lighter, they run power tools at remote work sites, household appliances at a campsite, or office equipment on the road by converting battery to AC power. • Electronic circuit protection • Low battery alarm and shutdown • Illuminated on/off switch

**PV-140** 140W maximum continuous power and 200W surge capacity • AC receptacle • 6" l x 3" w x 1.5" d, 1 lb. 4 oz ..... **Closeout \$39.99**

**PV-150** 150W maximum continuous power • One outlet • 1.65" h x 3.6" w x 5.5" d, 1 lbs ..... **\$42.99**

**PV-300** 300W maximum continuous power and 500W surge capacity • Modified sine wave • 2 AC receptacles • 6" l x 4" w x 1.75" d, 2 lbs **C/O \$59.99**

**PV-375** 375W maximum continuous power • 2 outlets • 1.75" h x 4.5" w x 6" d, 2.4 lbs ..... **\$65.99**



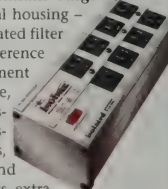
## SURGE SUPPRESSORS

**SUPER-7** For spike suppression and noise filtering, 18,000 amp surge suppression, and RFI/EMI filtering. Seven outlets, 7-foot cord, three diagnostic LED indicators ..... **\$19.99**

**SUPER-7+TEL** Same as above with 6 outlets and fax/modem protection for modular jacks.. **\$29.99**

## ISOBAR-8 ULTRA Premium Surge

Protector Rugged all metal housing - won't break or burn • Isolated filter banks to eliminate interference between connected equipment • Massive 1,200 joule, 96,000 amp spike suppression • Diagnostic alarm system indicates wiring faults, protection circuitry and power line status • 8 outlets, extra long 12' cord..... **\$79.99**





# MFJ Switching Power Supplies

Power your HF transceiver, 6 meter/2 meter/440 MHz Mobile/Base and accessories with these  
25 or 45 Amp MFJ MightyLite™ Switching Power Supplies!

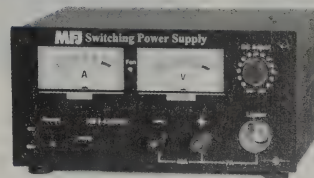
No RF hash . . . Super lightweight . . . Super small . . . Volt/Amp Meters . . .



**4125**



**4225MV**



**4245MV**

**Small & Lightweight – MightyLites™** are so light and small you can carry them in the palm of your hand! Take them with you anywhere – no more hauling around heavy, bulky supplies.

**Lightweight** – The 25A **MightyLite™** only weighs 3.7 pounds – 5 times lighter than an equivalent conventional power supply. And, the 45A model weighs just 5.5 pounds!

**No RF hash** – Some switching power supplies generate objectionable RF hash in your transmitted and received signal. But, these babies are clean!

**Low Ripple and Highly Regulated** – Less than 35 mV peak-to-peak ripple and better than 1.5% regulation under full load.

**Fully Protected** – You won't burn up these power supplies! They are fully protected with overvoltage and overcurrent protection circuits.

**Worldwide Versatility** – Switchable AC input voltage for 85-135 or 170-260VAC.

**Mighty Features** – Model 4225MV and 4245MV feature a front-panel voltage control which varies output voltage from 9 to 15VDC. Front-panel mounted 5-way Heavy Duty binding posts and cigarette lighter socket for mobile accessories. The 4245MV has two sets of quick-connects on the rear for accessories. Dual three inch illuminated meters monitor load voltage and current. Internal fan.

**4103 Miniature Switching Power Supply** – Delivers up to 40W (13.8 VDC @ 2.89A), RFI and Hash FREE. Only 4-1/8 x 2-5/8 x 1-3/8 in., weighs 10 oz. Ideal for the FT-817 and other QRP rigs. Input: 100-240 VAC @ 47-63 Hz. Over voltage, over current, and over temperature protected. Includes a DC output cable with a 2.1mm x 5.5mm plug that fits most MFJ, other ham accessories and QRP rigs. Adapter cable for the Yaesu FT-817 is included ..... **\$39.99**

Three models to choose from . . .

**4125** (left) Basic, no metering. 25A maximum or 22A continuous. Size: 5-1/2 x 2-1/2 x 2-1/2 inches, 3.5 pounds..... **\$99.99**

**4225MV** (center) 25A max. or 22A continuous. Size: 5-3/4 x 4-1/2 x 6 in., 3.7 lbs ..... **\$139.99**

**4245MV** (right) 45A max. or 40A continuous. Size: 7-1/2 x 4-3/4 x 9 in., 5.5 lbs ..... **\$189.99**



## MFJ 35/30 Amp Adjustable Regulated DC Power Supply

Massive 19.2 pound transformer . . . No RF hash . . . Adjustable 1 to 14 VDC . . .

**Super Heavy Duty** – This conventional power supply is excellent for powering all types of amateur transceivers and accessories. A massive 19.2 pound transformer allows this power supply to easily deliver 35A maximum and 30A continuous. It's highly regulated with load regulation better than 1% and ripple voltage less than 30 mV.

**Fully protected** – Over voltage, fold back and short circuit protection. A whisper quiet fan keeps components cool by increasing speed as load increases.

**Adjustable Voltage** – Front panel control allows adjustment from 1 to 14 VDC with a convenient detent set at 13.8V. Dual front-panel meters monitor voltage and current.

**Versatile** – There are three sets of output terminals including a pair of Heavy Duty, 5-way binding posts for transceivers, two pairs of quick-connects for accessories and a cigarette lighter socket for mobile accessories.

Size – 9-1/2 x 6 x 9-3/4 inches, 20.6 lbs.

**MFJ's No Matter What™**  
**One Year limited Warranty**

MFJ will repair or replace (at MFJ's option) these products for 1 year.



**4035MV \$139.99**

## MFJ High Current Multiple DC Power Outlets

Distribute power to transceivers and 6 or more accessories from your 12 VDC power supply



**1118 Deluxe Multiple DC Power Outlet** – The most versatile and highest current rating. Connect to a 12VDC source and distribute power to 2 transceivers and 6 or more accessories. Features 2 pairs of Super Heavy Duty 30A, 5-way binding posts, fused RF bypassed and rated 35A total draw. And, 6 pairs of 5-way binding posts for accessories rated for 15A total draw. Master fuse, On-Off switch with power LED. Built-in 0-25 VDC voltmeter, 6 ft. of 8-gauge, color-coded cable with ring tongue terminals. Binding posts are spaced for standard dual banana plugs. Size: 12.5" x 2.75" x 2.5" ..... **\$74.99**



**1116** Similar to the 1118 but does not have 30A posts. Has "Power On" LED and 0-25 VDC voltmeter. Rated at 15A total draw ..... **\$49.99**



**1112** Similar to the 1118 but no meter, power LED or On-Off switch. Powers up to 4 radios at the same time. Two 35A single posts and one 35A dual post. Size: 8 x 2 x 3 in., fits almost anywhere .... **\$54.99**



**1112** Similar to the 1116 but no On-Off switch, power LED, voltmeter or fuse ..... **\$34.99**

[www.mfjenterprises.com](http://www.mfjenterprises.com)



We accept I.M.P.A.C.® Government Credit Cards



# MIRAGE Power Amplifiers

## Boost Mobile, Base or Handheld Power!

All Modes: FM, SSB, CW . . . Superb GaAs FET preamplifier in G Models  
Overdrive, high SWR, Over-temperature protection . . . Remote controllable

**2 Meters  
All Mode  
160W • 200W  
300W**



**B-5018G** 160W output with 50W input. Requires 17 to 24 amps @ 13.8VDC. Low Noise GaAsFET Preamplifier. 5-1/2" w x 3" h x 12" d. .... **\$299.99**

Power Curve - typical for the B-5018-G												
IN	0.5	5	8	10	15	20	25	35	50			
OUT	---	52	99	119	125	130	135	145	160			

**B-2518G** 160W output with 25W input. Low noise GaAs FET preamplifier. Requires 17 to 24 Amps @ 13.8VDC. 5-1/2" w x 3" h x 12" d. .... **\$299.99**

Power Curve - typical for the B-2518-G												
IN	0.5	5	8	10	15	20	25	---	---			
OUT	5	56	91	111	135	153	160	---	---			

**B-1018G** 160W output with 10W input. Low noise GaAsFET preamplifier. Requires 17 to 24 Amps @ 13.8VDC. 5-1/2" w x 3" h x 12" d. .... **\$369.99**

Power Curve - typical for the B-1018G												
IN	0.5	5	8	10	---	---	---	---	---			
OUT	30	150	155	160	---	---	---	---	---			

**B-2530G** 300W output with 25W input. Low noise GaAsFET preamplifier. Requires 48 amps @ 13.8VDC. Size: 12" w x 5" h x 12" d. .... **\$689.99**

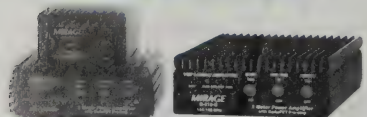
Power Curve - typical for the B-2530G												
IN	1	3	5	10	25	---	---	---	---			
OUT	30	95	140	250	300	---	---	---	---			

**B-5030G** 300W output with 50W input. Low noise GaAsFET preamplifier. Requires 48 amps @ 13.8VDC. Size: 12" w x 5" h x 12" d. .... **\$669.99**

Power Curve - typical for the B-5030G												
IN	1	3	5	10	25	50	---	---	---			
OUT	---	---	55	150	220	300	---	---	---			

**B-320G** Up to 200W output. Low power input for Handheld Radios 250mW to 10W. High power input for mobile radios, 10W to 50W. Low noise GaAs FET preamplifier. .... **\$429.99**

## 35W/100W for your HT



**B-34G** (left/bottom) Boosts 2M HTs with up to 8W output to 35W+ output. SSB/FM. GaAsFET preamp and mobile bracket. 13.8 VDC @ 4A. .... **\$89.99**

**B-34** (left/top) Like B-34G but FM only, no preamp or mobile bracket. 3-1/8" x 1-3/4" x 4-1/4". **\$69.99**

**B-310G** (right) Boosts 0.25 to 8W 2M Handhelds to 25 to 100W+ output. Includes preamp, mobile mounting bracket & BNC to amp patch cable. 13.8 VDC @15A. 4-3/4" w x 1-3/4" h x 7-1/4" d. **\$179.99**

Power Curve - typical for the B-310G												
IN	.25	0.5	1	2	4	6	7	8	---			
OUT	25	50	75	95	100	100	100+	100+	---			

**6 Meters  
All Mode  
150W**



**A-1015G** Covers 50 to 52MHz and provides 150W output with 10W input; FM/SSB/CW. Built-in Low Noise GaAsFET receive preamplifier, internal T/R switching and remote keying. 13.8 VDC @ 18-23 Amps. 5-1/2" w x 3" h x 12" d. .... **\$349.99**

**2M/440  
Dual Band  
35/45W**



**BD-35** For DUAL-BAND HTs with up to 7W output. Produces up to 45W output on 2M and 35W on 440 MHz. Automatic band selection, full duplex operation. Single connector for dual band radios and antennas. 12-15 VDC @ 7A. Size: 5" w x 1-3/4" h x 5" d. Mobile bracket included! .... **\$149.99**

Power Curves - typical BD-35 output power												
Watts Out (2M)	30	40	45	45+	45+	45+	45+	45+				
Watts Out (440 MHz)	16	26	32	35+	35+	35+	35+	35+				
Watts In	1	2	3	4	5	6	7	8				

## REMOTE CONTROL HEADS

**RC-1** - Allows remote control of Mirage amplifier functions: Power and pre-amp On-Off, FM/SSB mode select. Only 1.75" x 3.75" x 2.5". Comes with 18 ft. head to amplifier control cable. .... **\$45.99**

**RC-2** for B-XX18G series amplifiers ..... **\$45.99**



## More MIRAGE amps...

including models for 220MHz, 430-440MHz. Also, continuous duty Repeater Amplifiers for 6, 2, 1-1/4 meters, 70 cm, 450 MHz & ATV.

See the Price Guide under MIRAGE

## Low Noise GaAsFET Receive Preamps

- Improves weak signal reception • <0.8dB noise figure • 15-22dB gain with selectable level prevents receiver overload and intermodulation • Automatic TR switching up to 100W thru put • Rugged die-cast enclosures • In-Shack or Mast-Mount models



In-Shack Models - **\$129.99** ea.

**KP-1/6M** 50-54MHz **KP-1/2M** 144-148MHz

**KP-1/440** 430-450MHz

**KP-1/10M** for 28-30MHz - Closeout **\$119.99**

**KP-1/220** 220-225MHz - Closeout **\$119.99**

Mast Mount Models - **\$179.99** ea.

**KP-2/6M** for 50-54MHz **KP-2/2M** 144-148MHz

**KP-2/440** 430-450MHz

**KP-2/10M** 28-30MHz - Closeout **\$129.99**

**KP-2/220** 220-225MHz - Closeout **\$139.99**

**MFJ**

**DC Power for your MIRAGE Amplifier**



**4035MV** Heavy Duty - the transformer alone weighs 19.2 lbs! Voltage front panel adjustable 0-15 Volts. Dual meters show Volts and Amps. Rated 30A continuous, and 35A peak. Fully regulated and fully overload protected. 110 VAC. .... **\$139.99**

## VECTRONICS

... fine amateur radio products



## Versatile 300W Antenna Tuner

**VC-300DLP** Match any antenna • Full 1.8-30 MHz coverage • Rated 300W PEP, 200W continuous; 150W on 1.8 MHz • Continuous rotation capacitors and 12-position switched inductor • Peak reading backlit Cross-Needle Meter • Built-in 8-position antenna switch and dummy load 10-1/4" w x 9-1/2" d x 3-1/2" h, 3.4 lbs. .... **\$149.99**

## More Vectronics Amateur Products

**AT-100** Tuned active SWL antenna ..... **\$79.99**

**DL-300M** 300W dry dummy load ..... **\$44.99**

**DL-650M** 1500W dry dummy load ..... **\$74.99**

**DL-2500** 2500W dry dummy load ..... **\$179.99**

**VC-300M** 300W mobile tuner ..... **\$99.99**

**VC-300D** 300W tuner w/digital bargraph. .... **\$179.99**

**HPF-1** 75/3000Ω high pass TVI filter ..... **\$24.99**



## High Power Roller Inductor Tuner

**HFT-1500** Match any antenna Full 1.8-30MHz coverage • Rated 2KW PEP, 1KW continuous • Three continuously variable components: two 4.5kV capacitors and a crank driven a roller inductor with digital counter • Lighted Cross-Needle SWR/Wattmeter and 20-segment Digital Bargraph • Built-in 6-position coax switch and 4:1 balun • 5-1/2" h x 12-1/2" w x 12" d, 10 lbs. .... **\$399.99**

**HPF-2** Dix. 75/300Ω high pass TVI filter. .... **\$29.99**

**PM-30HF** 1.8-60 MHz SWR/wattmeter ..... **\$79.99**

**PM-30UV** 144/220/440MHz SWR/wattmeter. .... **\$89.99**

**LP-30** 1500W low pass filter ..... **\$69.99**

**LP-2500** 2500W low pass filter ..... **\$129.99**

See the Price Guide for a list of Vectronics Kits







# ICOM



**PW-1 HF + 50MHz Solid State Linear Amplifier**  
Frequency range: 160-15m, 6m • Power output with 220V input: 1000 PEP SSB, 1000W CW/RTTY (100% duty cycle, QSK) • 100W drive • Built-in all band automatic antenna tuner • Automatic AC voltage selector and band change • Current, voltage, temperature, SWR, output power protectors • Wide range adjustable ALC allows use with almost any rig • Control head may be detached from main unit (shown) • Built-in 110/220VAC supply • 14" w x 10.5" h x 14.5" d, 56 lbs. .... **\$4699.99**

# YAESU



**QUADRA SYSTEM HF/50MHz Solid-State Amp**  
Frequency range: 160-15m, 6m • 1000W (6m: 500W) • 100W drive • 4 twin MOSFET PA modules • Dot matrix multi-function LCD • 2 input and 4 output jacks for easy connection to station antenna • Built-in high-speed auto antenna tuner • Panoramic SWR display shows "before tuning" and "after tuning" SWR data • SWR protection • Auto band switching with FT-1000, FT-1000MP, FT-1000MP MK V, MK V FIELD, and FT-920 • 117VAC for 500W; 220V AC for 1000W • 6.25" x 5.375" x 16.25", 59 lbs. **\$4499.99**

# SGC

## SG-500 (52-96)

### SmartPower Cube™

Fully automatic band switching, micro-processor-controlled, HF linear amplifier. Ideal for fixed, mobile, and marine operation. Nearly indestructible! Cast-aluminum enclosure, extra heavy duty heat sinks, powder coat finish and durable electronic components. Micro-processor auto adjusts amp input sensitivity, monitors all parameters for faults (heat, VSWR, under-voltage, etc.) and auto selects the correct broadband filter. Operates unattended! • 1.6-24MHz • 500W PEP with 50-90W input • CW rating: 500W output for 10 min., or unlimited with optional fan • 10-18 VDC @ 40A average (SSB), 90A peak, or CW • 6" h x 12.25" d x 11.4" w, 21 lbs. .... **\$1249.99**



# MIRAGE



## VHF/UHF AMPLIFIERS

15 to 300 watts of brute power! Models for 6M-70 cm, base, mobile, repeater or ATV operation • 12V DC • FM (SSB/CW on some models) • 20dB gain GaAsFET preamplifier • Overdrive and high temperature protection • Remote control capability

Model	MHz	Max Input	Max Output	Amps	Pre-amp	Price
A-1015G	50-52	1-15W	150W	23	yes	\$349.99
B-34	144-148	8W	35W	4	no	69.99
B-34G	144-148	8W	35W	4	yes	89.99
B-1018G	144-148	0.2-15W	160W	25	yes	369.99
B-2518G	144-148	20-35W	160W	25	yes	299.99
B-2530G	144-148	10-35W	300W	48	yes	689.99
B-5018G	144-148	20-60W	160W	22	yes	299.99
B-5030G	144-148	0.5-50W	300W	48	yes	669.99
B-310G	144-148	0.25-8W	100W	15	yes	179.99
B-320G	144-148	2.5-50W	200W	25	yes	429.99
BD-35	144/440	1-7W	45/35W	7	no	149.99
C-22G	222-225	2W	20W	5	yes	154.99
C-211G	222-225	2W	110W	20	yes	329.99
C-1012G	222-225	10W	120W	25	yes	329.99
C-1022G	222-225	10W	220W	20*	yes	689.99
C-2512G	222-225	30W	120W	25	yes	309.99
D-15N	425-450	2W	15W	3	no	169.99
D-26N	430-450	2W	60W	12	no	259.99
D-1010N	430-450	10W	100W	15	no	379.99
D-3010N	430-450	30W	100W	20	no	349.99
D-1010ATVN	430ATV	10W	100W	20	no	399.99

N = Type-N connectors

\*at 28VDC

**RC-1 Remote Control Head** For most Mirage amps. Power/preamp On/Off, SSB/FM mode switch. 18" cable. 1.25h" x 3.75" w x 2.25" d. .... **\$45.99**

**RC-2 Remote Control Head** Same as the RC-1 but works only with the Mirage B1018G, B2518G and B5018G amplifiers. .... **\$45.99**

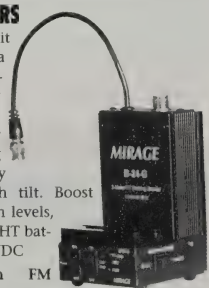
## DOCKING BOOSTERS

Slide an HT in and it instantly becomes a mobile or base! Selectable voltages allow use of most HTs. Place on dashboard or desk, or use mounting bracket for security and convenience with tilt. Boost mobile or base station levels, up to 50W. • Replace HT battery • Requires 13.8 VDC

**B-24-G** For 2m FM

**Handhelds** Up to 50W output with 0.5-8W input • 18dB GaAsFET preamp with on/off switch • LEDs show preamp on, on air, and transmit • 4.25" h x 3.35" w x 3.25" d • HT adapters available, see Price Guide. .... **\$109.99**

**BD-25** For 2M/440MHz FM HTs Up to 45W (2M) & 35W (440MHz) with 0.5-8W input • Full duplex feature lets you simultaneously talk on one band and listen on another with a compatible HT • Auto band selection • LEDs show band and power-on • Reverse polarity protection • 5.25" h x 3.25" w x 3.35" d • HT adapters available, see Price Guide. .... **\$164.99**



# LOGIKEY

## IDIOM Press

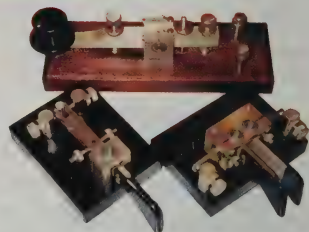


Full featured version of the famous Super CMOS III keyer design!

**K-3** Non-volatile memory • 6 editable messages, 1,530 characters • Messages can include programmed functions like automatic contest numbers and speed changes • Message can allow paddle inserted text & loop for continuous replay • Linear speed control (5-60 WPM) • Adjustable weighting and monitor tone • Tune function • Auto character spacing if desired • Can emulate others, including Curtis "A" timing • Ultra Speed mode for messages up to 99 WPM • Contest serial numbers 001-9999, with push button decrement • Beacon capability • Full compensation for QSK rig timing • Keys solid-state or grid-blocked tube rigs • 12V DC, < 0.1 amp • 4.25" w x 2.25" h x 4.75" d. .... **\$129.99**

**HK-3** Hook-up kit for the K3 Includes Paddle-to-Keyer cordset; RCA-to-RCA keyer output cable and 2.5 mm DC power plug cordset for 12V. .... **\$10.99**

# ALPHA DELTA



Designed and produced by R.A. Kent Engineers, for Alpha Delta. Feature rugged, machined, polished, solid brass components contained within permanent brass housings. Provide delicate, smooth feel and free movement with minimum friction and side play. Silver contacts with precise gap alignments are easily and precisely adjusted with instrument knurled heads on fine pitched screws and secured with locking nuts. Non-slip feet, and weighted for stability. Mounted on steel bases.

**SK-1** (top) Straight Morse Key ..... **\$129.99**

**SP-1** (left) Single Paddle Morse Key ..... **\$139.99**

**TP-1** (right) Twin Iambic Morse Paddle .. **\$149.99**



**VK-1** The "Vail Lever Correspondent" Key This replica key is a faithful reproduction, accurate to the type of hardware used during the mid-1800s, of the first full mechanism telegraph hand key made for Samuel F.B. Morse by Alfred Vail in 1844. Each component of the key is hand crafted and tooled in Kent's machine shop. Each key is individually serialized. A Collectable! ..... **\$198.99**





## FOR LEARNING/PRACTICING CODE

**414 Professional Classroom Tutor** Features include LCD readout, printer port and audio tape recording output. Build and save 3 custom sets for extra practice. Or combine these to obtain 48 characters for using the KOCH method. Customize random words for practice. Use with 144/440MHz FM HT or HF transceiver for on-air code practice. VECs can give up to 16 exams. Full-featured memory keyer (1000 character memory, semi/auto modes, iambic A/B, reverse paddle, change speed and tone on-the-fly). Practice sending into the 414 with iambic paddle or straight key. Use built-in or external speaker or headphones. Includes serial port cable and open-end patch cable. 12 VDC or 110 VAC. 8.5" w x 2.25" h x 6" d ..... **\$189.99**



**554 Code Practice Oscillator** Designed for classroom use with great sound that enhances learning of Morse code. Plenty of volume from a built-in 1W amp and 3" speaker. Volume control and adjustable tone control (400-1000Hz). On/off switch, power ON LED, 1/4" key jack, 3.5mm external speaker jack and DC input jack. Requires 12V DC. All-metal enclosure. 4.25" x 1.5" h x 5" d ..... **\$79.99**

**550 Telegraph Key** ..... **\$7.99**



## AIDED CW SENDING/RECEIVING

**452 Super CW Keyboard** (left) A stand alone CW keyboard that includes an RFI suppressed keyboard, a two line 16-character non-volatile LCD display. Send effortless CW by just typing the characters as you see what you are sending on the display. No computer to boot up, no program to load. • Speed: 5-100WPM • Weight: 5-95% • Sidetone: 300-3000 Hz sidetone • Serial Numbers (0-9999) • Has buffer and memory full audible indicators. Keys solid-state and tube-type rigs. Requires 12VDC..... **\$129.99**

**462B MultiReader** (right) Supply this unit with audio from a receiver or transceiver; tune in CW, RTTY, ASCII or AMTOR (FEC) signals; and read the auto decoded text directly from the 2-line, LCD display. • Copy most standard shifts and speeds in all modes • AutoTrak™ feature helps track and decode high speed CW • 8K memory stores several pages • PLL modem technology digs out weak signals • Precision tuning indicator • Printer port • 6.25" w x 2.5" h x 6.25" d • Requires 12VDC..... **\$169.99**

**461 Pocket-Size Morse Code Reader™** No cables to hook-up and no other equipment needed. Simply hold the unit near your receiver and it instantly displays CW text in English! Automatic speed tracking and instant 140-character replay on a 32-character LCD. If desired, a serial port lets you display CW text on a monitor using a computer and terminal program. Connect directly to a receiver with optional cable when it's too noisy or CW is unwanted. • Battery saver (uses 9V - not included) • 2.25" h x 3.25" w x 1" d, 5.5 oz ..... **\$79.99**



**5162 Receiver Cable** Connects the 461 to a radio's external 3.5mm jack ..... **\$5.99**



**464 CW Reader With Built-In Keyer** This unit simply plugs into a transceiver's speaker/phone jack and key jack. Add a single or iambic paddle or computer keyboard and it's ready for easy, complete CW operation. Sends and reads CW at 5 to 99 WPM with automatic speed tracking. • Easy menu operation • Large 2-line LCD shows "send and receive" text • Front panel speed and volume controls • 4 message memories • Type-ahead and read-again buffers • Adjustable weight and sidetone • Built-in speaker • RFI proof..... **\$169.99**

## KEYERS

**407D Deluxe Electronic Keyer** Features dot-dash mem., self completing dots and dashes; jam-proof spacing. RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone & volume, ON/OFF, tune, auto or semi-automatic. Selectable A or B-type iambic keying. Built-in speaker, uses 9V battery. 7" w x 2" h x 6" d .. **\$69.99**

**401D Econo Electronic Keyer II** Similar to 407D with external speed and volume controls, internal weight and tune controls. Uses 9V battery **\$49.99**

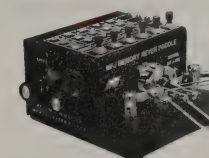


**434 Contest Voice Keyer™** Microprocessor-controlled, transformer-coupled - No RFI, hum or feedback. Automatically call CQ and send a call. Store frequently used phrases, like "CQ, Contest this is AASMT," in your own voice. Record and play back five natural sounding messages totaling 75 seconds. Repeat messages continuously and vary the delay from 3-500 seconds. Receive and play back off-the-air signals. Easy to use - plug in an 8-pin microphone cable then plug the 434 shielded cable into the mic input. Controls tailor audio level to match your voice. Built-in speaker and audio amplifier. Uses 9V battery, 9-15VDC or AC with optional adapter. 6.5" w x 2.5" h x 6.5" d ..... **\$169.99**

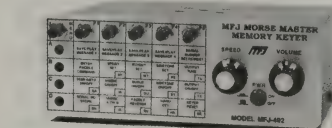
**422D Keyer-Paddle Combo** Keyer unit installs on top of Bencher iambic paddle. Uses Curtis™ chip. 9 to 50 wpm. Adjustable weight and tone, dot-dash memory and sidetone. Semi-automatic and tune or auto modes. Keys grid block, cathode or solid state. Uses 9V battery or AC adapter. 4.125" x 2.625" x 5.5" d **\$159.99**



**422DX** Keyer only ..... **\$79.99**



**490 Keyer/Bench Paddle Combo** A feature-rich keyer in a compact configuration that fits right on its own Bencher iambic paddle. Provides memories, morse trainer, sidetone, automatic serial numbering and more. 5" w x 3" h x 5.5" d. Uses 9-volt battery or 110 VAC with MFJ-1312D..... **\$189.99**



**492 Menu Driven Memory Keyer** No complex sequences. Save messages, enter iambic, semi-auto, handkey, message queue, paddle modes. Select iambic A/B, Morse trainer, store starting serial numbers. Holds 192 characters in 4 memories (expandable to 8K+ characters in 8 memories). Front panel speed (5-100 WPM) and volume control for sidetone speaker. Direct and grid block keying. 9V battery or 110V AC adapter. 6.5" x 2.5" x 6.25" **\$89.99**

**451 Morse Keyboard** Stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character messages. Requires 12VDC..... **\$99.99**

**452 Morse Keyboard** with 16 character LCD display. Comes with keyboard ..... **\$129.99**



**495 Millennium CW Keyer** A powerful keyer combining the latest microprocessor technology with non-volatile memory. Easy-to-use menus and LCD display - send CW, load messages and set functions using a paddle, keyboard or serial port. Iambic mode works with direct or grid-block outputs. • PIT output, built-in speaker, sidetone • Iambic keyer with dot and dash memories • 32 message memories • Repeat message continuously • Insert timed pauses, auto-incrementing serial number, or embedded commands to change speed, weight, etc. • Message editing capability • Input queue to store multiple messages • Digital and analog linear speed control • Farnsworth method with speed from 10-99 wpm • Type-ahead keyboard buffer • Dual user/configuration mode..... **\$149.99**





## VIBROPLEX™

The Original Bug, c. 1904, is still made using tools similar to those used by inventor Horace Martin. Designed for 20-50+ wpm.

- 110 Standard** Painted base/chrome top **\$169.99**
- 105 Deluxe** Polished chrome base and top parts with fine jewel movements..... **\$199.99**
- 100 Presentation** Polished chrome base and 24K gold-plated base plate and chrome top parts, fine jewel movements..... **\$269.99**
- 090 Gold** Gold-plated base, chrome top **\$309.99**



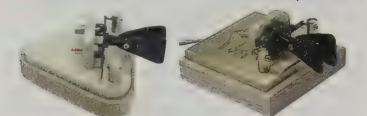
Vibrokeys: Single lever paddle (left) initiates automatic dots and dashes of an electronic keyer. Iambic model (right) allows automatic dot/dash insertion.

### Vibrokeyer

- 120 Standard** Black base, chrome parts. **\$149.99**
- 115 Deluxe** Chrome base and top parts with jeweled movements..... **\$184.99**
- 113 Gold** 24K gold-plated base and top parts with jeweled movements..... **\$279.99**

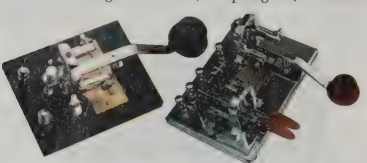
### Iambic

- 135 Standard**..... **\$149.99**
- 130 Deluxe**..... **\$189.99**
- 125 Presentation** 24K gold-plated base and top parts with jeweled movements..... **\$249.99**
- 123 Gold**..... **\$279.99**



**145 Brass Racer Iambic** (left) Solid brass Iambic paddle on a polished hardwood base..... **\$129.99**

**150 Square Brass Racer** (right) Solid lacquered brass Iambic paddle mounted on a polished hardwood base. Magnetic action, no springs.. **\$139.99**



**Straight Keys** (left) Unique mechanical action, unlike any straight key ever manufactured.

- 155 Standard**..... **\$149.99**
- 160 Deluxe**..... **\$189.99**
- 153 Gold**..... **\$279.99**

**Deluxe Double Keys** (right) Choice of iambic and straight or vibrokeyer and straight key. Double keys allow you to instantly switch from using an electronic keyer to the personal touch of a straight key.

- 165 Straight key/Iambic**..... **\$329.99**
- 170 Straight key/Vibrokeyer**..... **\$329.99**



**NORCOMM**  
TONE SIGNALING PRODUCTS

## TONE SIGNALLING

**NC-101 Encoder** Micro-mini. CTCSS encoder, field tuneable to any of the CTCSS tone frequencies between 67Hz and 254Hz. 5 to 15VDC. 0.60" w x 0.80" l x 0.15" h **NorFax™ #5040**..... **\$21.99**

**NC-104 Programmable Encoder** Sub-miniature field programmable CTCSS encoder unit for limited space. Provides standard 37 EIA CTCSS tones + 69.37, 97.4 and 205.5Hz. 7 to 24VDC. 0.625" w x 0.80" l x 0.170" d **NorFax™ #5150**..... **\$26.99**

**NC-106 Programmable CTCSS Encoder/Decoder** A sub-miniature crystal-controlled digital unit. Field programmable with dip switches providing any one of the standard 37 CTCSS tones + 97.4Hz. 6-24VDC. 0.85" w x 1.35" l x 0.28" h **NorFax™ #5230**..... **\$62.99**

**NC-401 Touch-Tone® Decoder** Unique micro-mini unit combining 2 distinct multi-addressable decoders for control of remote or local applications. Decodes all 16 DTMF characters with an address length of 1-14 characters and features EPROM memory for storage of both primary and secondary codes, input/output functions, deadbeat disable and user outputs, plus default reset. Programming easily performed by means of a conventional DTMF encoder. 6-24VDC. 0.80" w x 1.37" l x 0.23" h. **NorFax™ #5545**..... **\$62.99**

**NorFax™ auto fax retrieval system - 530-477-8403**

## UM Unified Microsystems

### XT-4 CW Memory Keyer

Designed for QRP, Field Day, mobile CW county hunting - any portable operation. Also goes well in the shack with smaller rigs. 8-45 WPM. Memories: 4 with 100 Morse characters each positive keying output only via RCA phono jack output. 1/8" (3.5mm) stereo jack input. Paddle reverse for left or right-hand operation. Auto power save mode w/flashing LED engages after 30 min. of inactivity. Requires 9V alkaline battery..... **\$69.99**

**KC-4** Cable set for XT-4..... **\$9.99**

### VK-64 Combination CW

and Voice Keyer Store and play back CQs, contest exchanges, etc. in both CW and voice. Voice keyer has 4 memories (up to 15 seconds each). Set CW keyer between 10-45 WPM (4 memories programmable with 300 characters each). • Configure for iambic A/B keying, weight, side tone, and paddle reverse • Tune function • Auto repeat and 1/2 to 12-second delay (CW and message #1) • Run stand alone through panel or control with PC/laptop through printer port (standard 25-pin) • Use with major contest logging programs • 12V wall transformer power supply..... **\$229.99**

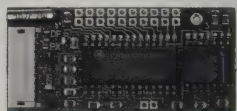
**VKC-8** Cable Shielded audio cable semi-kit wired and tested except for microphone and transmitter connectors (8-pin)..... **\$24.99**



## COMMUNICATIONS SPECIALISTS, INC.

## TONE ENCODERS & DECODERS

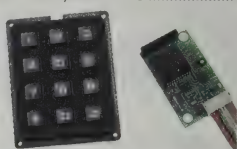
**SS-64** Programmable CTCSS Encoder Super small for easy install in most HTs. Standard with 64 EIA tones between 33 and 254.1Hz. Individual tones dip-switch selectable 0.66" x 1.08" x 0.21", requires 6-28 VDC..... **\$28.99**



**TS-64DS** Field programmable CTCSS Encoder-Decoder DIP switch programmable for 64 EIA tones 33-254.1Hz. 1.25" x 2", 0.3", 6-28 VDC..... **\$57.99**



**TE-32** Multi-tone Encoder Provides direct access from a front dial rotary switch to all EIA CTCSS tones from 67.0 to 203.5Hz, allowing users to access various repeaters. Great for mobile or test bench. 5.25" x 3.3" x 1.7", 6-30 VDC..... **\$49.99**



**ID-8** Multi-Featured Automatic Morse ID'er Programmable via 12-button pad • Eight changeable messages • 200 characters total • CW speed: 1-99 wpm • ID interval timing: 1-99 min. • ID hold-off timing: 0-99 seconds • CW tone: 100-3000Hz • 6-20VDC • 1.85" x 1.12" x 0.35"..... **\$69.99**

Wiring diagrams and lists of Fax-on Demand documents can be obtained from [www.com-spec.com](http://www.com-spec.com).



**Combination Code Practice Oscillator and CW Monitor** Volume control, 3" speaker, & headphone terminals. Requires a code key and a 9V battery **OCM-2K Kit \$19.99 OCM-2W Wired \$24.99**



**K-1** (left) Low-cost general purpose key w/phenolic base, adjustable tension, contact spacing.. **\$10.95**

**K-4** (right) Deluxe high quality key. Polished brass base, shorting bar..... **\$16.95**





# Microphones/ Elements/Accessories

... defining the standards for  
Amateur Radio communications ...

## GOLDLINE

### FULL RANGE DUAL ELEMENT MICROPHONES

Provides full-range, smooth and articulate audio for AM, FM and "HI-FI" SSB. The wide 60-16 kHz frequency response, with a +4 dB midrange peak @ 2 kHz, produces brilliant articulation for clear, understandable SSB audio, and adds a well-balanced robust low end. In addition, the GOLDLINE comes equipped with a second HC-4 or HC-5 element for extra punch when you need it.

The diecast body is finished in high lustrous black lacquer and topped with a crushproof golden grill. A "wide-narrow" switch selects the second element, and a "soft touch" microswitch provides smooth, noise free PTT operation. Requires a CC-1 adapter cable.

**GM-4** GOLDLINE with Full Range and HC-4 elements ... **\$140.99**

**GM-5** GOLDLINE with Full Range and HC-5 elements ... **\$140.99**

**GM-V** "Vintage" GOLDLINE - A built-in matching transformer allows its use with older rigs like Collins, Hallicrafters, Johnson, etc. Uses the Full Range element and switchable Passive EQ circuit or an alternate narrow, more articulate response. .... **\$155.99**

### 20th ANNIVERSARY COMMEMORATIVE GOLDLINE

**HSP** Special Presentation Sports a gorgeous high gloss gold lacquer finish, laser engraved with a serial number (1-200). Comes with wooden case, laser engraved with the famous HEIL logo. Equipped with a single full-range broadcast element and Narrow/Wide switch, however it does not include the narrow HC element as in other Goldlines. .... **Special Order \$199.99**

## 'HERITAGE'

### Professional Cardioid Dynamic Studio Microphone

**HMG** A replica of the famous "Elvis" microphone of the 1950's. The finish is a special "showchrome" where the steel body is heavily chrome plated, the finish looks about 6 inches deep. This incredible microphone houses the new HEIL PROLINE commercial balanced output broadcast element. Out performs many \$1000 studio microphones. .... **Special Order \$165.99**

- Generating Element: Dynamic
- Diaphragm: Large diameter low-mass aluminum
- Body: Chrome Plated Steel
- Frequency Response: 40 to 18,000 Hz
- Impedance: 600 ohms balanced (3-pin XLR)
- Output level: -55dB @ 1000Hz
- ON/OFF audio switch (not PTT)
- Polar pattern: cardioid, uniform front and back discrimination

**CB-1** Optional Classic Base... **\$65.99**

Optional CB-1  
Classic Base



### HIGH PERFORMANCE MICROPHONE ELEMENTS

For improved audio performance, replace the cartridge in your factory microphone with a Heil; the same elements used in their High-Performance microphones. Tiny in size, easily replaces existing cartridges in most microphones.

#### HC-5 - Full Range Articulation

Makes any rig sound better and more intelligible by providing full articulation and clarity. The response is 350-4000Hz, with a sharp roll-off under 300Hz and above 3100Hz, with a peak at 2100Hz. The result is very clear, easy-to-understand SSB audio for everyday communications that will get you lots of compliments. .... **\$30.99**

#### HC-4 - The "DX Dream Machine"

Super clarity with more punch for contest, DX and weak-signal VHF/UHF work. Outstanding results on aurora, backscatter, etc. Produces a high-pitched, pile-busting 500-3800Hz response with a 10dB peak @ 2000Hz, and a sharp 12dB per octave roll off @ 500Hz. It's a penetrating sound, not particularly pleasing for everyday rag chewing. .... **\$30.99**

### the CLASSIC 1930s Replica

An exact replica of the RCA 74B broadcast microphone. High quality, all metal construction - no plastic. Dual elements, featuring the new PROLINE broadcast dynamic element with a 50-18kHz response, plus your choice of the second communications element, easily switchable from the back panel, along with the 'soft touch' PTT switch. Dual impedance - a small slide switch on the bottom selects 600 or 30k ohms. The stainless steel trimmed cast steel base is removable and the logo can be rotated for inverted mounting on the new PL-2T Heil PROLINE boom. Needs a CC-1 cable. Heil Sound mails your call letters after purchase.

**HCL-5** (w/HC-5)... **\$229.99** • **HCL-4** (w/HC-4)... **\$229.99**

**HCL-IC** for early ICOM-prePRO.... **Special Order \$229.99**



### the iCM

#### High Performance Microphone for early (pre-PRO) ICOM transceivers

The f.e.t. electret element provides plenty of drive, great sound and plenty of punch for those older ICOMs that lacked enough gain to work well with high quality Heil or other dynamic elements. When using it with the high gain inputs of the new PRO series, simply reduce the microphone gain to acceptable ALC levels.

Beautiful platinum finish, soft touch PTT switch. Has an attached 8-pin ICOM cable with jack for the FS-2 foot switch or HS-1 hand switch. Fits all Heil booms and shock mounts. .... **\$89.99**



### STUDIO-STYLE MICROPHONES

Old favorites upgraded with a new body and PTT switch like the GOLDLINE. The HM-10 comes with your choice of a HC-4 "DX Dream Machine" or HC-5 "Full Range Articulation" element. The HM-10 Dual contains both the HC-5 and HC-4 elements (switch selectable), a choice for varying conditions. Both need a CC-1 cable.

**HM-10-4** (HC-4) or **HM-10-5** (HC-5) ..... each **\$65.99**

**HM-10-DUAL** (HC-4 and HC-5) ..... **\$115.99**



### HAND MICROPHONES

**HMM** Dual Element - Heavy duty, commercial quality. Uses a "Full Range Dynamic" element and a switch selectable HC-4 "DX" element. Internal noise cancelling cavity reduces background pick-up. The coiled cable is terminated with an 8-pin plug for KENWOOD or YAESU (specify) - not for ICOM. .... each **\$78.99**

**HMM-IC** Single Element - Same as HMM, but contains a HEIL "Electret Condenser" element designed specifically for outstanding performance with ICOM radios (no HC-4 or switch) ..... **\$58.99**

### ADAPTER CABLES/ SWITCH/ETC.



**CC-1** Adapter cable - Required for the GOLDLINE, and HM's. Specify the cable with connectors to match Drake, Icom, Kenwood, Ten-Tec or Yaesu radios. The 6 ft. cable is wired with a 1/4 in. female jack to accommodate the plug from a FS-2 Footswitch or HS-1 Pushbutton Hand Switch. (Specify radio)..... ea. **\$30.99**

**HS-1** Pushbutton Handswitch - Plugs into CC-1 jack for PTT control of your radio. A 6 ft. cable terminates into a 1/4 in. phone plug. .... **\$25.99**

**FS-2** Dual Footswitch - Heavy duty and ergonomically correct with the hinge under the heel. Two 10 amp switches activate in sequence for transceiver and amplifier control. Separate control cables with standard phone plug. .... **\$38.99**

**AD-100** Microphone/Boomset Adapter - Allows use of all HEIL products with the YAESU FT-100 series. Solves the problem of the multiplexed microphone, touch tone audio and control data appearing on the microphone line. .... **\$25.99**

**HD-AT** Headphone Attenuator/Adapter - Allows 1/4 in. headphone jacks to plug into a 1/8 in. jack. Contains a -6 dB pad which reduces output and allows use of HEIL headsets with FT-100 or IC-706 without overload and distortion. .... **\$5.99**

**XT-1** Matching Transformer - A sub-miniature unit that matches Low-Z microphones to High-Z inputs used in older Collins, Drake, Hallicrafters, etc. .... **\$15.99**





## Headsets/Boom Microphones

**PRO-SETS** Rugged, lightweight boomsets designed for performance and comfort during extended wearing times. The padded, fully adjustable headband provides maximum comfort. Heavily padded vinyl earpads seal out noise, and are removable for washing. The flexible microphone boom is fully adjustable to your liking. Cables are wired with 1/4 in. stereo plug and 1/8 in. transmit audio plug and use a Heil AD-1 (\$17.99) to adapt to various radios.



**PRO-SET-PLUS** Maximum comfort and noise seal is provided by new full cover leatherette ear pads with removable cotton covers. The cushioned inner headband is self-adjusting for a perfect fit, and the boom swings 180° for left or right side operation. Includes switchable, dual microphone elements; the Heil HC-5 for normal operation, the HC-4 for DX. The boom and top headband have rugged but flexible internal steel bands, and can be adjusted as you wish without fear of breaking. Great sound from frequency tailored speakers mounted in tuned cavities, and a phase reversal switch changes the sound field. The audio changes from being heard "centered" in your head, to a spatially widened effect. This feature greatly reduces listening fatigue and in some conditions can reduce noise and enhance intelligibility ..... **\$189.99**

**PRO-SET-PLUS-IC** Same, but for ICOM, has HC-4 and 'ic' elements and adapter cable ..... **\$206.99**

**PRO-SET-4** Lightweight headset with flexible boom and HC-4 "DX" element. Uses the Heil AD-1 cable system for use with different radios. **\$130.99**

**PRO-SET-5** Same, but with the HC-5 "Full Range" element..... **\$130.99**

**PRO-SET-IC** Same, for ICOM with 'ic' Electret element & cable... **\$147.99**



**BM-10 Series** Headset/Boom Microphones – featuring a lightweight (8 oz.), soft and comfortable headphone for prolonged use in contests, etc. The high performance boom microphone is available with the Heil HC-5 "Full Range" or HC-4 "DX" element. The cord is wired with 1/4" stereo plug and 1/8" transmit audio plug and uses a Heil AD-1 (\$17.99) to adapt to various radios.

**BM-10-4** with the HC-4 "DX" element..... **\$89.99**

**BM-10-5** with the HC-5 "Full Range" element..... **\$89.99**

**BM-10-IC** Headset/Boom Microphone for ICOM only A special FET Electret element produces plenty of articulate audio for ICOM radios, includes adapter cable. **\$106.99**

**BM-5 SERIES** Same as the BM-10 but with a Single Headphone. Great for mobile!

**BM-5-4** with HC-4 "DX" element ..... **\$69.99**

**BM-5-5** with HC-5 "Full Range" element ..... **\$69.99**

**BM-5-IC** with HC-5 "Full Range" element, designed for Icom radios..... **\$86.99**

**TRAVELLER** Single-side Headset/Boom Microphone Uses a high performance electret element and features Up/Down and PTT in-line switches. Includes a 3 ft. interface cable Lightweight and comfortable, usable with left or right boom position.

**Traveler-K** for 8-pin KENWOOD

**Traveler-KM** for modular KENWOOD

**Traveler-706** for the IC-706

**Traveler-8PIC** for 8-pin ICOM

**Traveler-YM** for the modular FT-817, 857, 897 and FT-900



**\$89.99**  
each



## QUIET PHONE™

Active Noise Cancelling Headset



The Heil QUIET PHONE is a result of many years of research and development at Heil Sound. Normal headsets are designed to reproduce audio and pay little attention to the outside environment. In most cases, the surrounding background noise is louder than the audio that you are trying to hear in the headset.

Heil Sound applies a unique active Noise Canceling Technology using two small out-of-phase microphones and a differential amplifier placed deep inside the headphones. These microphones pick up the outside ambient noise as well as the audio information. Using the phase information and processing it in the differential amplifier reduces sounds under 400 Hz up to 70%. The result is a dramatic reduction of ambient noise as well as noise from blowers, jet engines, the TV in the next room and other operators in the shack.

**HQP \$99.99**



Powered by a single  
in-line "AA" battery

- Soft Leatherette cushions with adjustable headband to insure most comfortable listening for extended periods of time.
- Operates on a single "AA" cell for 30 hours providing clean high fidelity dual channel audio.
- Right angle 1/8 in. plug for use with most CD or MP-3 players. The right angle allows plugging into the audio jack usually located in the arm rest of commercial airliners. A 1/4 in. stereo adapter is included for use with your amateur radio equipment.
- Folds flat for easy carrying





## Booms/Bases/PROLINE



Shown with GOLDLINE  
and SM-1 Shock Mount,  
not included

### PL-2T "Topless" Pro Studio Boom - \$75.99

Built by the wizards at Heil, this perfectly balanced arm has internal springs that are silent when moved, and a removable top to simplify hiding your microphone inside the wire channels. There is no need to remove the connector in order to snake it through. Simply remove to PL-2T top, lay the microphone cable in the channel and snap the top back into place. It puts the microphone right where you want it. The precision mechanism provides a 41 in. reach and is balanced for microphones up to 2 pounds. Comes with a "C" clamp table mount. Accepts 5/8" x 27 threaded microphones, or for real class, attach a Heil SM-1 Ultimate Mount System.

Shown with GOLDLINE  
and clip, not included



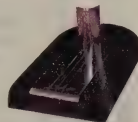
### SB-1 Small Microphone Boom \$33.99

Extends 10-20 inches, with angle adjustments for proper positioning. Std. 5/8" x 27 thread mic. mount. "C" clamp mount secures to shelf or table.

### CB-1

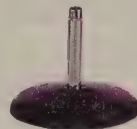
#### Classic Base - \$65.99

Heavy, 2 lb. 7 oz. lb. cast steel with stainless steel trim, 4"w x 6-1/2"d x 3/4"h with a 3" high chrome 5/8" x 27 thread mount. A beautiful reproduction of a 1950 RCA microphone base.



### TB-1 Table Base Mount - \$25.99

A heavy, 2 lb. 10 oz cast steel, 6" diameter x 1" high with a 4" high chrome 5/8" x 27 thread microphone mount.



Shown with GOLDLINE  
Microphone, not included

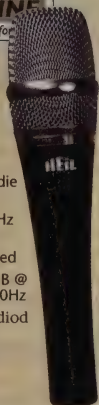
### SM-1 The Ultimate Shock Mount System - \$50.99

For GOLDLINE, HM-10, or "icm" microphones. An 8-point flexible suspension supports and isolates microphones from mechanical vibrations. The 3/8"-27 threads will mount on to the PL-2T and other standard microphone stands and booms.



## PROLINE DIVISION

Affordable Performance

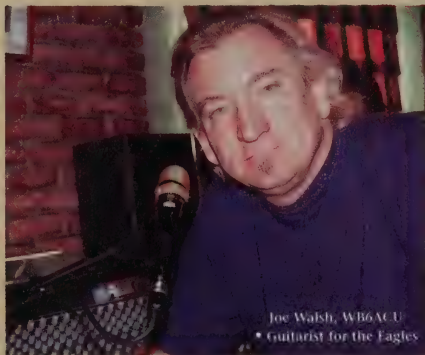


### PROLINE Specifications:

Element: Dynamic  
Body: Matte steel, die cast zinc  
Response: 40-18 kHz  
Impedance: 600Ω balanced  
Output Level: -55dB @ 1000Hz  
Polar Pattern: Cardioid  
Weight: 14 oz.

### Special Order

These great new Heil products are designed for commercial broadcast, studio recording and concert sound applications, all requiring a smooth, wide response without the usual I.M.D. that has plagued all other dynamic elements. The new Heil PROLINE element has raised the bar, producing clean, clear natural audio with a lack of bass-boosting proximity effect. All Heil PROLINE products are true 600 ohm balanced output with commercial 3-pin XLR male connectors. For use with unbalanced inputs use one of the special Heil XLR cables.



Joe Walsh, WBACU  
\* Guitarist for the Eagles

### GLP GOLDLINE PRO

The most natural, cleanest vocal microphone. designed for broadcast, recording and live performances. As with all Heil PROLINE elements, it achieves its exceptional performance by using a powerful magnet structure of Neodymium, Iron and Boron with a 1-1/8" aluminum alloy, low mass voice coil assembly. Balanced 600 ohm output; usable with unbalanced inputs by using a Heil XLR cable .....**Special Order \$168.99**



### HCLP CLASSIC PRO

An exact replica of a 1930s RCA broadcast microphone. The beautiful stainless trim base can be removed allowing the Classic Pro to be inverted and installed on the Heil PT-2T Pro Studio Boom. The single Heil PROLINE element outperforms \$1,000 microphones. Has true 600 ohm balanced output; may be used with unbalanced inputs by using an XLR cable... **Special Order \$269.99**



Heil mails you your  
Call Letters after Purchase

**CC-1 XLR Mic Cable** (Goldline PROs) for 8-pin Icom PRO, Yaesu or Kenwood.... **Special Order \$30.99 ea.**





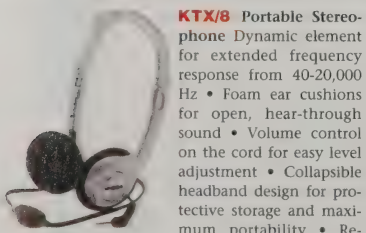
**QZ/5** Passive Noise Reduction (right) Isolates listener from noise sources like car and jet engines. Ideal for the race track and metal detection! Unique head-strap, velcro design allows for secure fit and immobilization. 60Ω impedance • 102dB SPL/1mW sensitivity • 40-20,000Hz sensitivity • Volume control and stereo/mono switch • Single entry, 8' coiled cord, 3.5mm plug • 15 oz..... **\$49.99**

**QZ/50** Revolutionary Active Noise Reduction (left) Reduces harmful and annoying low frequency sounds in noisy environments. Behind-the-head design provides comfort during extended wearing. Dynamic element, 30-20,000Hz • 32Ω impedance • 98dB sensitivity • Single entry 8' cord, 3.5mm plug • Requires AAA battery • 2.5 oz..... **\$49.99**

**QZ/99** Passive Noise Reduction Stereophone with Mono/Stereo Switch Frequency response: 40-20,000Hz • Coiled, single entry, 8' cord with 3.5mm/6.4 mm plug • Sensitivity: 102dB SPL/1mW • Impedance: 60 Ω • 15 oz..... **\$59.99**



**QZ/2000** Noise Reduction Stereophone Revolutionary Active Noise Reduction reduces harmful/annoying low frequencies • >15dB SPL from 40-200Hz; average 10dB SPL from 30-1000Hz • 15-20,000Hz response • Straight, dual entry, 4' cord • Compact control case and collapsible stereophone • Adjustable headband • Input jack for audio play-through and 2-prong adapter for in-flight use • 101 dB SPL/1mW sensitivity • 5kΩ impedance • Includes 2 AA's • 2.3 oz..... **\$169.99**



**KTX/8** Portable Stereophone Dynamic element for extended frequency response from 40-20,000 Hz • Foam ear cushions for open, hear-through sound • Volume control on the cord for easy level adjustment • Collapsible headband design for protective storage and maximum portability • Reliable "L" plug for improved durability and reliability • Straight, single entry 4' cord..... **\$14.99**

**Y-86** "Y" Cord Delivers dual stereophone connection from a single sound source. Reliable "L" plug for improved reliability and durability..... **\$4.99**

## PREMIER communications

**SPM-100** Small Speaker/Mic This is a lightweight, compact unit. The microphone features a high-quality condenser-style mic element and high-fidelity audio circuit that produces excellent transmitted audio clarity, as well as a powerful speaker. It may be secured to the user's lapel or shoulder..... **\$27.99**



**SPM-400A** Mini Boom Mics The SPM-400A headsets include an in-the-ear speaker and a rubber-covered earloop design that adjusts to comfortably fit either the right or left ear of any user. The unit features an in-line Push-To-Talk switch that can be clipped to the user's lapel or belt..... **\$37.99**

See the Price Guide to find correct model numbers for your specific brand of radio.



**YAESU**  
Choice of the World's top DX'ers™



**MD-200A8X** Ultra-High Fidelity Desktop Microphone Designed for use with the MARK V. Employs a studio-quality, wide range (30-17000Hz) dynamic element optimized for high fidelity SSB. Exclusive Variable Side Pressure Control allows adjustment of overall frequency response from natural, high-fidelity sound of everyday S-9+ rag chewing, to high-articulation with a moderate peak above 1500Hz for DX or contests. • Aluminum die-cast base with locking and momentary PTT switches • Up/down scanning switches • Housing can accommodate favorite DX or contest mic element • Also works with FT-847, 920, 1000MP, FIELD, also 1000/1000D without "TX" LED • Includes dual-conductor cable with regular and modular plugs • 4.7" w x 12.6" h x 4.9" d, 2.2 lbs..... **\$379.99**

## KENWOOD

**HS-5** Deluxe Headphones Specifically designed for use with communication systems. Provide natural sound and eliminate pressure, permitting long hours of fatigue free listening. To increase the volume level, when you are using the headphones in a noisy room or want privacy; replace the ear-pads with the vinyl leather, pressure fit ones, increasing the sound pressure by about 10dB while sealing out noise. (both pads included). Includes 6 feet connecting cord with plug, 8Ω impedance • 200mW @ 1000Hz max. input • 150-4000Hz (-6dB) frequency response • Approx. 350g..... **\$79.99**



**HF-24RS** Scanner Headphones Designed specifically for racing fans. • Listen to driver/pit conversations with reduced noise • Snug fit, cushioned headband and comfort fit cushions allow hearing action over crowd and engine noise • Dual volume control to maximize hearing levels • Includes 3.5mm, premium-gold, right-angle plug with a 10' coiled cord..... **\$19.99**



### HEADSET MICS

**288** Deluxe Headset Microphone (left) Lightweight, comfortable for Yaesu, Icom, Kenwood units. Superb transmit audio, and earphone tonal quality. Foam covered microphone element is attached to headset with a flexible rubber boom allowing proper positioning. PTT switch attached to 6' cord, hold or attach to clothing..... ea. **\$24.99**

**292Y** Featherweight™ Earphone/Mic (right) Has an earbud earphone and a tiny thumb-sized microphone/PTT switch that's built right into the 4 ft. cord. Works with Icom Q7A, Yaesu FT-10R, FT-40R, FT-50R and VX series transceivers..... **\$17.99**

### MICROPHONES

**297** Desk Mic (left) A sensitive condenser mic element coupled with a low-noise amplifier. Speech tailored - select SSB Mode for smooth, articulate DX or Full-range Mode for clear FM or AM. Flexible microphone boom, momentary and locking PTT switch. On-the-Air LED indicator, frequency up/down switch. • 4" w x 1.25" h x 6" d base • Requires 2 AA's..... **\$69.99**

**5397** 8-Pin Adapters for 297 Available for Yaesu, Icom and Kenwood units..... ea. **\$15.99**

**295** Mini Speaker Mic (right) For popular Yaesu, Icom and Kenwood handhelds. Uses a non-directional electret element. Transmit LED..... ea. **\$15.99**



### HEADPHONES

**392B** Perfect for amateur and shortwave listening. Superb padded headband/ear cushion design, only 8 oz. High-performance drivers with full 100Hz-24,000Hz response provide enhanced sound & speech fidelity. Earphones have individual volume and tone controls. Gold-plated plug, 9' cord and 1/4" adapter (mono/stereo) included..... **\$19.99**







## TELEPHONE RF INTERFERENCE FILTERS

Cure telephone RF interference in the most irritating cases even when dealing with transmitters with full legal power output. Use any number of filters with no adverse effect on telephone performance.

**RF-1** For single line equipment including wired or cordless phones, answering/fax machines, modems, etc. Uses standard modular connectors ..... **\$16.99**

**RF-1/2-LINE** For 2-line or multi-line, multi-station electronic key phone systems ..... **\$22.99**

**RF-1/COILED** For use when RFI enters thru coiled telephone cord between base and handset **\$22.99**

**RF-2** Hard-wired, provides a wide range of installations optional to add RFI rejection at a variety of physical/electrical locations in the system; inside jacks, behind wall mounts, etc. .... **\$10.99**

## VECTRONICS®



**LP-30 (right)** Low Pass Filter Suppress TV interference from HF transmitters. Use between transmitter and antenna or tuner. Up to -70dB attenuation of harmonics falling in TV bands. For 52Ω, up to 30MHz and 1500W RF continuous power. **\$69.99**

**LP-2500** Rated for 2.5KW continuous .. **\$129.99**

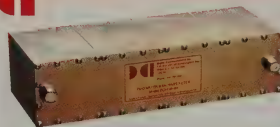
**HPF-1 (left)** High Pass Filter Install at TV antenna terminals. Stops interference caused by overload or harmonics from HF transmitters operating below 30MHz. High harmonic attenuation but low loss in the 52-550MHz TV passband. For 300Ω (balun and Type-F connector supplied for 75Ω) ..... **\$24.99**



**High Pass Filters** Stop TV, FM and VCR interference caused by harmonics or overload. Installs at TV or VCR antenna terminals or connector. Sharp frequency cutoff at 52MHz with 70dB attenuation below 50MHz.

**HP-300T** (300Ω) or **HP-75T** (75Ω) .....ea. **\$12.99**

## DCI DIGITAL COMMUNICATIONS



## BANDPASS FILTERS

Install between a 2m, 220 or 440MHz rig and antenna to reduce strength of out-of-band interfering signals while allowing wanted signals to pass through at full strength. Eliminate squeals, squawks, beeps and strange voices from a UHF or VHF radio caused by intermodulation from strong, nearby pagers, police radio, etc. Effectively reduces spurious emissions on transmit. Hear desired signals even in crowded, urban centers • Design: 2M/220MHz – 4 helical resonators; 440MHz – four 1/4-wave linear resonators; both with aperture coupling • VSWR 1.5:1 • 200W rating • Made of extruded aluminum, copper and brass • 12w"x 3'h x 5"d • 2 lb, 11oz

**146-4H** 144-148; Loss <1 dB; Selectivity: -57dB @ 136MHz and -43dB @ 156MHz. SO-239 silver-terfon connectors ..... **\$99.99**

**146/444DB** 144-148/438-450MHz; Selectivity: -50dB @ 136MHz, -40dB @ 156MHz, -30dB @ 425MHz, -25dB @ 465MHz. SO-239 silver-terfon connectors ..... **\$169.99**

**145-2H** 144 to 146MHz ..... **\$99.99**

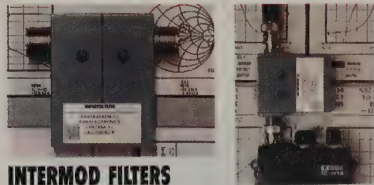
**223.5-3H** 222 to 225MHz; Loss 1 dB; Selectivity: -33dB @ 233 3MHz and -28dB @ 233 MHz. SO-239 silver-terfon connectors. .... **\$109.99**

**445-10C** 440-450MHz; Typical selectivity: -47dB @ 425MHz, -50dB @ 456MHz; Loss 1dB. Type-N silver-terfon-gold connectors ..... **\$119.99**

**435-10C** 430 to 440MHz ..... **\$119.99**

Upgrade to Type-N connectors on 2m and 220MHz models – add \$10 to price; Special Order

## PAR ELECTRONICS



## INTERMOD FILTERS

Solve most intermod or front end overload problems from paging systems, etc. with these asymmetrical, 45-54dB notch filters. Centered on the offending pager spectrum of 152-153MHz, they work effectively with a loss of ≤0.5dB and a 1.25:1 VSWR. Works with dualbanders by providing a low-loss pass-thru of 70cm signals.

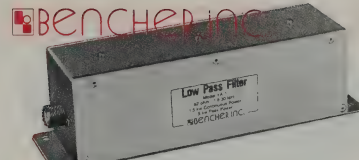
**VHFDN152** 2m base/mobile intermod filter, rated 50W, SO-239 connectors, 2"h x 1"d x 2½"w ..... **\$69.99**

**VHFTN152-158** Triple Cavity Similar to the VHFDN152 except it places a second notch in the 158MHz pager band in addition to the dual notch in the 152 MHz band. 2½"h x 1"d x 3"w ..... **\$82.99**

**VHFDN152HT** 2m intermod filter for handhelds BNC connectors, 20W. 1½"h x ¾"d x 2"w .. **\$68.99**

**UHFND450** UHF intermod filter for base or mobile. Blocks pagers & two-way transmitters that cause 70cm intermod; transparent to 2m.. **\$69.99**

**UHF-12** 12" Belden RG-58/U jumper cable with silver/gold/terfon PL-259's on each end ..... **\$9.99**



**YA-1** The best general purpose low pass filter available. Check the specs at [www.benchline.com](http://www.benchline.com)! 1kW, 80db attenuation @ 50MHz ..... **\$85.99**

## MFJ ENTERPRISES, INC.

### 704 50Ω Low Pass Filter

Install between HF transmitter and antenna to reduce TVI from harmonics that fall in the TV band. Handles 1kW from 1.8 to 30MHz .... **\$49.99**

**711 75Ω High Pass Filter** Install at TV/VCR antenna input to reduce/eliminate interference from HF transmitters operating up to 30MHz.. C/O **\$19.99**



**784B Super DSP Filter** Eliminates those heterodynes; reduces noise and interference on SSB/CW/AM, digital modes, VHF, EME, satellite. Tunable FIR filters minimize ring, prevent data errors. Up to 60dB attenuation. Tunable Spotting Tone™ auto tunes CW filter in narrowest bandwidth. 2W audio amp with AGC. 12V DC or 110VAC with MFJ-1315. 2.5"h x 9"w x 6"d ..... **\$229.99**



**701 RFI Free Choke Kit** Eliminate common RFI problems by winding offending cables around an RFI suppressing toroid. Effective from 0.5-200MHz. Separates into halves for easy winding of all types of cable: computer ribbon, TV coax, power cord, telephone wire, audio-video cables. Halves mount in snap-together plastic frame. For severe RFI problems and larger cables, multiples can be stacked for more effect. (Pack of 4 toroids) ..... **\$14.99**

## RF Inquiry



**HI-Q Common-Mode™ Filters** For tough RFI problems. Lowpass filters eliminate harmonic-type interference but are not capable of filtering out "Common-Mode" (differential noise energy transfer between transmitter and ground including stray capacitance). For cleaner signals, add an RF Inquiry filter. • 1.8-70MHz • -50 to -60db below 250MHz common mode attenuation • Insertion loss: less than 0.1dB • 50Ω impedance • Connectors: SO-239 terfon

**CF250E-UHF** 250W, .98 x 10 in. 0.5 lb. **\$89.99**

**CF5KV-UHF** 5kW, 2.1 x 12.6 in., 1.3 lb **\$124.99**



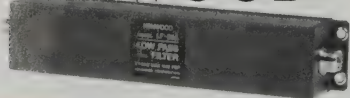


**DSP-599ZX** Noise Filter Digital Signal Processing provides superior reduction of QRM and QRN • Incorporates the newest high speed CPU that gives unparalleled features and is field upgradeable • Exact filter settings seen through the LCD, push buttons, and "Visible Memory" • Optical encoders for continuous tuning of filters • Examines and measures signal and noise correlation, dynamically filtering out undesired noise • Data and bandpass filters with steep skirts and linear phase response for CW and RTTY • Bandwidths range from 10Hz-600 Hz, and center frequencies from 200-2150Hz • Wider filters allow easy tuning and listening to multiple CW signals simultaneously • Supported data filters are RTTY (two methods of use), AMTOR, PACTOR, G-TOR™, HF Packet, SSTV, WeFAX, SITOR and CLOVER • Test instrument mode provides audio sine wave generator, audio millivoltmeter and two-tone audio generator for maintenance/setup of audio circuits in radios • VHF/UHF weak signal and aurora provides remarkable improvement in clarity • Improves readability of distorted aurora SSB signals ..... **\$436.99**



**ANC-4** Antenna Noise Canceller And Diversity Combiner Works with any transceiver (250W or less) or receiver for voice, data and CW from 500kHz-80MHz. Reduces or eliminates locally-generated power line, computer and TV noise. It cancels noise before it affects AGC circuits. Frequently, reception of signals well below noise level is possible. Connects between antenna and connector. A second antenna acts as a noise pickup. Front panel controls allow adjustment of signal phase and magnitude. The ANC-4 also operates as an active antenna using a noise antenna and noise gain control to amplify antenna output. And, it can be used as a diversity combiner to pick up weak signals or null interfering signals. Requires 11-16V DC @ 300 ma. 1.7" h x 6" w x 4.3" d, 2 lbs. .... **\$209.99**

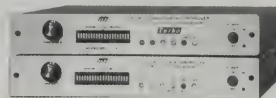
## KENWOOD



**LF-30A** Low-Pass Filter Suppresses harmonics contained in RF signals from HF transmitters, reduces possibility of TVI/BCI. 30MHz cutoff for 160-10M operation. Attenuation: >90dB @ 90-300 MHz. Insertion loss: < 0.5dB @ 30MHz. 50Ω, rated 1 KW PEP. 9.6" w x 2" h x 1.5" d, 1.2 lbs. .... **\$64.99**



**1270C** TAPR TNC-2 Clone Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX. KISS interface for TCP/IP, 256K EPROM & 32K RAM. AX.25/Level 2-V2 software. Comes with interface cable, serial port connector and AC adapter. 12 VDC. 9.5" x 7.5" x 1.5" ..... **\$119.99**



**1278B** Multi-mode Data Controller 10 modes: PACTOR, 16-level FAX, color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex & memory keyer. Enhanced mailbox • 32K RAM • 16-gray level modem • 20 LED tune indicator • MARS mode • Internal modem header • 10 program message buffers • Dual radio ports • KISS interface • Host mode • Threshold control • RS-232/TTL ports • 12 VDC • 9.5" w x 9.5" d x 1.5" h ..... **\$279.99**

**1278B/DSP** The 1278B w/DSP filter..... **\$359.99**  
**780** DSP Board Plug-in "brick wall" DSP data filter for 1278B ..... **Closeout \$59.99**



**781** DSP for all TNCs This separate unit gives you Kantronics, Timeswave, etc. TNC digital signal processing power..... **Closeout \$89.99**



**1272** TNC Switch Pushbutton selection for voice or digital. You specify the radio and TNC connection. Multiple models available ..... (ea.) **\$39.99**



**1273B** Sound Card Interface A basic plug-and-play interface for the digital modes. Has jacks for sound card, radio, speaker and RS-232 (no mic jack or switch). Includes RS-232, audio and mic cables and software. No external power needed. **1273B** for 8-pin round mic plug, **1273BM** for 8-pin modular (RJ-45) mic plug ..... ea. **\$59.99**



**8621** 2M Packet Data Radio High performance thru 9600 baud. Plug in TNC cable, your antenna and power - you're ready for packet. Crystal control on 145.01MHz, 5W output. Requires 12 VDC @ 1A. 5" w x 5.5" d x 1.5" h ..... **\$139.99**

**8621X2** Dedicated VHF Data Radio for APRS Automatic Packet Reporting System transceiver. Ready to go on 144.39MHz ..... **\$149.99**



**1275/1275M** Sound Card-to-Rig Interface Connect between a transceiver and computer and enjoy all digital modes without additional equipment. Operate PSK-31, packet, APRS, AMTOR, RTTY, SSTV, CW, HSCW meteor scatter, contest voice keying, contest memory keyer, etc. Internal jumpers program mic wiring for any radio. Includes audio cables, power plug and a CD with a collection of the most popular amateur radio software to operate the digital modes. Requires 12VDC (110 VAC with optional adapter). **1275** for 8-pin round mic plug or **1275M** for 8-pin modular (RJ-45) .. ea. **\$99.99**



**1279** Super Sound Card Interface This super sound card interface has all of the features of the MFJ-1275 plus • Auxiliary input jack, allows switching of a sound card from the 1279 to something else. No more plugging and unplugging! • Direct CW/FSK keying jack, allows direct CW or FSK keying operation • Headphone jack, use stereo headphones, also turns off external speaker • Foot-switch, use a footswitch or other for PTT (push-to-talk) when not using VOX • Plug and Play, includes software, RS-232 and audio cables, AC power supply • **1279** for 8-pin round mic plug, **1279M** for 8-pin modular (RJ-45) mic plug ..... ea. **\$129.99**

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## RIGblaster

The easiest way to connect a radio to a PC to operate old or new, analog and digital modes. Over 100 ham radio programs transmit and receive over 20 different modes. Your radio, a RIGblaster, PC, and appropriate software take the place of old expensive adapters, TNC's, digital voice keyers, microphone equalizers, rig control interfaces, DSP receive filters, internet linking interfaces, automatic beacon clocks and more. Use the processing power built in to your PC instead of a old fashioned outboard box that only does a few things. All RIGblasters are fully ground isolated, come with an up to date CD collection of ham radio operating software, all the cables and power supply you need to get on the air. Five models to choose from for your operating needs. Use with any modern computer and radio with a matching mic connector.

**RB/PR/C RIGblaster Pro** The only complete computer interface! Allows you to use all sound card software, computer control a radio, equalize and record a microphone, operate keyboard FSK and CW and more. Built in rig control interface for most radios. Single serial port rig control and sound card operation. Separate CW and FSK keying outputs. Transmit audio muting. Two mic. switchover. For the ham that wishes to do everything that can be done with computer and a radio. 8-pin and RJ45 radios as supplied ..... **\$249.99**

**RB/PL/C RIGblaster PLUS** Run all sound card modes with fully automatic operation with your mic. No manual switching, no plugging or unplugging. Works with all transmit and receive sound card software. CW or FSK direct keying output. 8-pin and RJ45 radios as supplied ..... **\$139.99**

**RB/MB/C RIGblaster M8** Run all sound card modes with fully automatic operation using your mic. No manual switching, plugging or unplugging. Works with all transmit and receive sound card software. 8-pin and RJ45 radios as supplied.. **\$109.99**

**RB/NO/8C RIGblaster Nomic** 8-pin Small and inexpensive. Perfect for portable or temporary setups. No power supply needed. Perfect for an Internet remote link. Unplug your mic. whenever you wish to use sound card software. 8-pin radios as supplied ..... **\$59.99**

**RB/NO/RJC RJ-45 Nomic RIGblaster** Same as above with RJ45 connector ..... **\$59.99**

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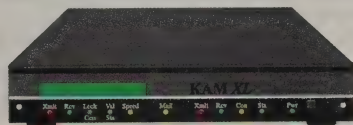
## MULTI-MODE DATA CONTROLLERS

**KPC-3 Plus/128** 1200 bps • Packet, GPS/APRS, Host, KISS and WEFAX modes, use with EMWIN • Personal Mailbox (PBS) now supports multiple calls • Remote access, sensing and control with two A/D and two control lines • PBS 100k, expandable with optional 512k RAM ..... **\$186.99**

**9612 Plus/128** 1200 port and second port of 4800-38,400 bps • Most modes/capabilities of the KPC-3 Plus and POCASG (paging) • Unique design allows the addition of another port, high or low speed • Remote access, sensing and control capability • Telemetry transmission capability... **\$349.99**

**Hostmaster II+** Packet Software A great program to combine with the KAM, KPC-3plus/128 and older TNC's (not for KAM 98 or KAM XL). The program uses split screens, allows for packet and non-packet operations (with KAM) simultaneously and cuts down dramatically on the use of keyboard commands to your packet unit ..... **\$89.99**

**KAM 98** Single port multimode TNC for HF and VHF use • Packet, GPS/APRS, Host, KISS, WEFAX, CW, RTTY, AMTOR, PACTOR, G-TOR®, Free signal detection for HF email, A/D inputs/TTL outputs • HC11 for more processing power to accommodate future upgrades • Wider range of speeds; use 1200 bps packet on 10 meters ..... **\$399.99**



**KAM XL Multi-Mode DSP Controller** Kantronics third generation multimode TNC, a state-of-the-art design giving operations on HF, VHF, and UHF, while supporting DSP modems and popular new modes of operation • Packet 300/1200bps • G-TOR • Pactor I • AMTOR ARQ (FEC, SELFEC, CCIR 476 and 625) • PSK31 • RTTY • NAVTEX/AMTEX • ASCII • WEFAX • CW • Dual-port mailbox • Remote SYSOP access • GPS NMEA-0183 compatible • Kantronics Host Mode • KISS ..... **\$399.99**



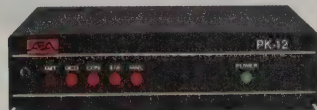
**Host terminal Software** - Takes advantage of true multitasking capabilities of Windows 95, 98, ME, NT and 2000. Release 1.5 with PSK-31 support.

**PacTerm 98** For Kantronics' TNCs ..... **\$79.99**

**PK-Term 99** For Timewave and AEA (PK-12/96/232) TNCs. Support for PK-232/PSK ..... **\$79.99**



**PK-232/PSK** Multimode Data Controller The most popular data controller ever built, now with a sound card interface. Offering a new level of performance with accurate Digital Signal Processing filters for internal data modes and dual transformer isolation for sound card data modes. • 18 DSP filters, twin peak RTTY filters, 100HZ CW filter and adaptive PACTOR filters. Weak signals magically appear through noise and interference bounces off the filters for cleaner copy than old analog filters. Supports new sound card modes in addition to existing PK-232 modes. Comes with a complete cable and connector set, in addition to Timewave's on-line and telephone support. Requires 11-16V DC @ 800 ma. 8.25"d x 2.5"h, 3 lbs ..... **\$531.99**



**PK-96/100K** 9600/1200 packet TNC 9600 and 1200bps packet-ready • GPS firmware standard • Remotely program • GPS commands • Stand-alone tracking hardware HDLC for accuracy • True DCD to hear weak signals • Gateway as a node • Full MailDrop facility • PC PackRatt Lite™ terminal control and APRS™ software included • AEA host mode • Advanced command set • Identify TCP/IP, TheNet and NetRom • Separate external TX for 9600/1200bps adjustments • External reset • Windows™ and Macintosh™ programs available • Requires 12V DC • 6.25"w x 7.5"d x 1.375"h, 1.25 lbs. 128K RAM ..... **\$219.99**

**AC-5** 120V Power Supply Provides 13.8VDC @ 1.7A for the DSP-599zx, PK-232/DSP, DSP-2322, DSP-1232, DSP-232, PK-900 or other low consumption accessory. Desktop, has 6 ft. long input and output cords so the unit does not take up any wall socket or power strip space ..... **\$24.99**



**HAL COMMUNICATIONS CORP.**



**DXP-38** Multimode HF Modem Stand-alone DSP modem provides excellent performance on RTTY, CLOVER, ASCII, AMTOR and P-Mode. DOS and Windows (95, 98, NT 4.0) software included. Uses the same serial I/O commands as, and will operate with any 3rd-party software written for the DSP-4100. 12V DC @ 0.6A. 3" x 7" x 10". **C/O \$369.99**

**RTTY-1** Tuning Indicator EZ to use, very accurate, works with any FSK radio modem. Crossed LED bars show correct tuning for FSK modes including Baudot Teletype (RTTY), ASCII Teletype, AMTOR, SITOR, P-Mode, HF Packet. Filters: 2125 Hz (Mark), 2295 Hz (Space) 5.5"w x 3.75"h x 1.25"d, 0.5 lb. Requires +9V-18V DC @ 160 ma ..... **\$99.99**



## Coaxial Dynamics



ELEMENTS  
WORK IN  
BIRD METERS!

### RF DIRECTIONAL WATTMETERS

**81000-A** RF Directional Wattmeter Accurate RF Power measurement in 50Ω coaxial systems. Uses an internal line section and "Quick Match" plug in elements in the range of 0.1–10,000 watts full scale, and from 0.45 to 2300MHz.

Simply plug in the appropriate measuring element and select forward or reflected direction. Measured average RF power is indicated directly on the large 4.5" "taut-band" meter with three scale display. The meter is also mirrored and shock mounted to provide the most reliable and accurate readings.

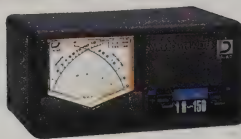
Strong shock-proof housing. With SO-239 connectors (Type-N female Special Order) ..... **\$260.99**

**83000-A** RF Peak Reading Wattmeter Similar in appearance and operation to the standard Model 81000-A wattmeter. Contains an amplifier which allows measuring of both Average and Peak Envelope Power (PEP) with the flip of a switch. Internal 9V battery is required and supplied for peak reading mode ..... **\$393.99**



**ALAN BROADBAND ZAP-CHECKER** Broadband Field Strength Bug Detector A wide-band (10MHz to 4.5GHz) receiver that provides visual indications of the presence or RF energy. Sensitive, detects 2.4 GHz bugs at 40 feet. Analog meter and LED displays, for viewing at a distance and at nighttime. Silent vibrator mode for in-pocket detection and hands-free operation. Use for bug detection, wireless, aircraft maintenance, health/environmental and ham radio. Detects and measures, cell phone radiation, microwave ovens, computer wireless devices, microwave data transmissions, covert surveillance cameras and bugs, radiating computers and electronic games, and background radiation levels - ambient TV and FM. 2" w x 5" h, 5 oz ..... **\$89.99**

## DAIWA industry co. ltd.



### CROSS NEEDLE SWR/POWER METERS

**CN-101** Covers 1.8-150MHz, rated at 1500W from 1.8-60MHz and up to 1000W at 144MHz. Shows Forward and Reverse power and VSWR simultaneously. Three power ranges: 15/150/1500W (RMS or PEP); ±10% of full scale accuracy. SWR detection sensitivity: 4W minimum. 50Ω impedance, SO-239 connectors. 6" w x 3" h x 3.875" d, 1.5 lbs. ... **\$99.99**

**CN-103M** Same as CN-101, but covers 140-525MHz and rated at 200W. Two power ranges: 20/200W (RMS or PEP) ..... **\$99.99**



### PROFESSIONAL SERIES

The CN-801 series of cross needle meters features the most accurate meter and largest meter face in the Daiwa line.

The large, easy-to-read meter has .5W increments and is lighted. This is truly a professional quality meter. • 5W SWR detection sensitivity (min.) • 50Ω impedance • 6" l x 4" h x 4.5" w • 2.2lbs

**CN-801H** 1.8-200MHz, 20/200/2kW ..... **\$149.99**

**CN-801V** 140-525MHz, 20/200W ..... **\$154.99**

**CN-801S** 900-2500MHz, 2/20W, Type-N connectors ..... **Special Order \$239.99**



VANCO™



### LOW COST METERS

**SWR-1** Field Strength or SWR Meter (left) Range: 3.5-150MHz, Impedance: 52Ω, SWR: 1:1-3:1, Accuracy: 5%, Meter sensitivity: 300uA. 5" RF pick-up antenna. 6" h x 2" w x 2.875" d, 14 oz. ... **\$19.99**

**SWR-3** SWR Meter (right) Range: 1.7-30MHz • Impedance: 50-52Ω • SWR: 1:1-3:1 • Accuracy: 5% • Sensitivity: 300uA • 2.5"x3.5"x3", 6oz ..... **\$14.99**



**370052** Digital Multi-Meter 3.5 digit LCD, 0.5" h with polarity • DC volts, 5 ranges: 200mV-600V • AC volts: 200V and 600V • DC current (5 ranges): 200uA-10A • Resistance (5 ranges): 200Ω-20kΩ • Diode test: forward voltage drop • Transistor test: shows hFE value • Comes with 100-hour, 9V battery and plug-in test leads • 2.76" w x 4.96" h x 0.94" d, 6oz ..... **\$19.99**

## Bel MERIT

**DX-405** Multi-function Multi-meter 10 functions/39 ranges • 3.5 digit, manual ranging • Frequency meter, to 20MHz • 0.25% DCV basic accuracy • Measure voltage, current, resistance & diode • Continuous beeper • Data hold • Auto power off • Input warning • Tilt stand with holder • Holster • 4" w x 7.5" h x 1.5" d, 1.5 lb ..... **\$69.99**



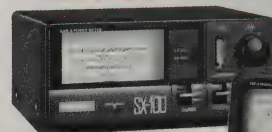
**DM-80** Pocket Digital Multimeter 3200 count • 32 segment bargraph • Auto/manual ranging • Auto off • Data hold • Range • Voltage, AC/DC 450V • Resistance, 30MΩ • Diode test • Continuity-beeper • Over range indication • Low battery mark auto polarity • Carrying case • 2" w x 4.1" h x 0.4" d, 3.2 oz ..... **\$34.99**

### VELLEMAN

**DVM-810** Digital Multimeter Compact design makes this meter a perfect fit for any toolbox or even shirt pocket! It features multiple functions and an easy-to-read LCD display. • 3.5 digits • 19 ranges • Measures voltage, current, resistance, transistor and diode • Battery included ..... **\$9.99**



## DIAMOND ANTENNA



### SWR/POWER METERS

(left) Five models measure power and SWR with 5-10% of F.S. accuracy. Illuminated meter, sensor switch, LED indicator. Power ratings for intermittent operation. For continuous, ratings vary with frequency. SO-239 connectors on all except SX-1000 (type-N). 6" w x 2.5" h x 4" d, 2 lbs.

**SX-100** 1.6-60MHz, 30/300/3kW PEP... **\$134.99**

**SX-200** 1.8-200MHz, 5/20/200W PEP ..... **\$94.99**

**SX-400** 140-525MHz, 5/20/200W PEP... **\$114.99**

**SX-600** Dual band, 1.8-160MHz and 140-525 MHz, 5/20/200W PEP ranges ..... **\$169.99**

**SX-1000** Dual band, 1.8-160MHz and 430-1300MHz, 5/20/200W PEP ranges ..... **\$214.99**

### CROSS-NEEDLE SWR/POWER METERS

(right) Indicate forward/reflected power and SWR simultaneously. 50Ω impedance, SO-239 connectors, 10% F.S. accuracy. 3.3" w x 3.4" h x 3.7" d, 9 oz.

**SX-20C** 3.5-30/50-54 and 130-150MHz ranges: 30/300W. Needs SW minimum for VSWR. **\$89.99**

**SX-40C** 144-470MHz (220MHz with correction factor); 15/150W (3W minimum power)... **\$79.99**



# MFJ 1.8-170 MHz



**259B \$239<sup>99</sup>**

## 269 SWR Analyzer E-X-P-A-N-D-E-D Frequency Coverage & Added Features

**1.8-170 MHz plus 415-470 MHz**  
Looks nearly identical to, and has all the features of the 259B PLUS...

- Covers 1.8 to 170 MHz plus 415 to 470 MHz
- Built-in CoaxCalculator™ – calculates coax length in feet given coax length in electrical degrees and vice versa, and any velocity factor (great for building matching sections and phasing lines for multiple antennas).
- New 12-bit A/D converter gives much better accuracy and resolution than common 8-bit A/D converters.

### New 1.8 to 170 MHz Range features:

- Read Complex Impedance as series equivalent resistance and reactance ( $R_s + jX_s$ ) or as magnitude ( $Z$ ) and phase (degrees). Also reads parallel equivalent resistance and reactance ( $R_p + jX_p$ ).
- Measure SWR and loss of coax with any characteristic impedance from 10 to over 600Ω, including 50, 51, 52, 53, 73, 75, 93, 95, 300, 450Ω.

### 415 to 470 MHz Range features:

- Read SWR, return loss, reflection coefficient simultaneously, and cable loss in dB and match efficiency.
- Has LCD logarithmic SWR bargraph and SWR meter for quick tuning.

**269 \$319<sup>99</sup>**

[www.mfjenterprises.com](http://www.mfjenterprises.com)

# MFJ SWR Analyzers

*... for Serious Antenna Performance!*

You've spent a lot of time and money on your antenna system, so why not make sure it's giving you top performance? An MFJ SWR Analyzer will do that – plus, it will make you very popular because all of your Ham buddies are going to want to borrow it!

The MFJ 259B and 269 are complete Ham radio test stations, including – Frequency Counter, RF signal generator, SWR Analyzer, RF Resistance and Reactance Analyzer, Coax Analyzer, Capacitance and Inductance Meter & more!

The 259B and 269 can take the frustration out of tuning your antennas for maximum performance. Gone are the days of using a conventional, sometimes questionable, SWR meter. You will no longer have to drag your rig (RF source) out into the yard. No more running in and out of the house or up and down the tower to make those seemingly endless readings and adjustments.

The 259B and 269 are self-contained and fully portable units, with built-in battery power and RF source so you can take it right to the antenna. Take one reading to get a complete picture of your antenna, and make tuning adjustments on the spot.

Operation is simple, just connect the feed line, set the bandswitch and tune the dial – just like a transceiver. All information is clearly displayed instantly on the large, easy-to-read, two-line LCD screen and side-by-side meters.

When tuning transmission lines or making up phasing harnesses for stacking antennas, you can quickly determine exact 1/4 or 1/2 wavelengths. You can also determine the velocity factor, coax cable loss, length of coax and distance to a short or open in coaxial cable.

Read SWR, return loss and reflection coefficient at any frequency, simultaneously, or inductance and capacitance at RF frequencies at a glance.

The 259B and 269 operate on 110V with the 1312D adapter (\$14.99) or on 10 "AA" internal batteries, not included. For rechargeables, there is a built-in charger, MFJ's 1312D required.

All metal cabinet, 6-3/4" h x 4" w x 2" d.

### Overall, here's what you can do...

- Read antenna SWR & Complex Impedance from 1.8-170MHz with the 259B and additionally 415-470MHz with the 269. Complex Impedance can also be read as series resistance and reactance ( $R + jX$ ) or as magnitude ( $Z$ ) and phase (degrees).
- Find true resonant frequency of antenna.
- Trim dipoles and verticals to resonance.
- Adjust your Yagi, quad, loop and others. Change antenna spacing and height – watch SWR, resistance and reactance change instantly.
- Perfectly tune critical HF mobile antennas in seconds for top performance – without subjecting your transceiver to high SWR.
- Measure your antenna's 2:1 SWR bandwidth on one band, or analyze multiband performance over the entire spectrum.
- Check SWR outside the ham bands without violating FCC rules.
- Adjust your antenna tuner for a perfect match without creating QRM.
- Take the guesswork out of building and adjusting phasing lines, matching networks and baluns.
- Accurately measure distance to a short or open in a failed coaxial transmission line. Measure the length of a roll of coax and also determine loss, velocity factor and impedance.
- Measure frequency with built-in counter.
- Frequency counter function.
- Troubleshoot and measure resonant frequency and approximate Q of traps, stubs, transmission lines, RF chokes, tuned circuits and baluns.

## SWR Analyzer Accessories

**29C Carrying Case** – Tote your 259B anywhere with this custom carrying case. Wear it around your waist, over your shoulder, or clip it onto the tower while you work. Has back pocket for carrying dip coils and coax adapters. Special foam filled fabric cushions blows and protects unit from wear and tear. .... **\$24.99**

**39C Carrying Case** – Fits the 269. .... **\$24.99**

**66 Dip Meter Adapter** – For grid dip operation. Set of two plug-in coils covers 1.8-170MHz range. .... **\$19.99**

**98 Accessory Pack** – Includes 39C case, 66 dip adapter and 1315 AC adapter. .... **\$54.99**

**99 Accessory Pack** – Includes 29C case, 66 dip coils and 1315 AC adapter. .... **\$54.99**

**99B Accessory Pack** – Includes 10 "AA" NiMH batteries, 29C case, 66 dip coils and 1315 AC adapter. .... **\$77.99**

**99C Accessory Pack** – Includes 10 "AA" NiMH batteries and 1315 AC adapter. .... **\$34.99**

**731 Tunable Measurement Filter** – Use with 259B or 269 for accurate measurements in the 1.8-30 MHz range while in the presence of strong RF fields from nearby broadcast stations or other RF emitters. .... **\$89.99**



**MFJ SuperCell**

**B2AA01**  
1300mAh AA Ni-MH  
Battery... ea. **\$2.99**  
**B2AA10**  
10 Pack .... **\$24.99**



## SWR/POWER METERS

**864** (bottom) Covers 1.8-60MHz, 144MHz and 440MHz bands. Dual sensors – connect an HF and VHF/UHF rig at the same time. Monitor SWR and power of either. Lighted Cross-Needle meter indicates 30/300W forward and 6/60W reflected power simultaneously. Uses 12V DC for meter light. 7.25" w x 2.5" h x 2.25" d ..... **\$84.99**

**862** (middle) Similar to 864, but for 144MHz, 220 MHz and 440MHz. Ranges: 30/300W forward and 6/60W reflected. 5.75" w x 2.5" h x 2.25" d... **\$54.99**

**860** (top) Similar to the 864, but covers HF 1.8 to 60MHz. Ranges: 30/300W forward and 6/60W reflected. 4.5" w x 2.25" h x 3" d ..... **\$44.99**



**815B** Features large 3 in. Cross-Needle meter for accurate SWR and peak or average power readings from 1.8 to 60MHz. Ranges: 200/2000W forward and 50/500W reflected. Push button selection. 12V DC meter light. 7.25" w x 2.5" h x 2.25" d... **\$79.99**

**817** Looks and features similar to 815B but covers 144/440MHz bands. Ranges: 200/20W forward and 50/SW reflected. 7.25" w x 2.5" h x 2.25" d... **\$89.99**



**812B** (top/left) Indicates forward and reflected power on 2M/220MHz and SWR from 144-220 MHz, plus field-strength from 1-220MHz. Power ranges: 30/300W. 4.5" w x 2.25" h x 3" d..... **\$34.99**

**816** Toroidal Meter (bottom/right) Indicates forward and reflected power from 1.8-30MHz. Power ranges: 30/300W. 4.5" w x 2.25" h x 3" d..... **\$34.99**



**844** VHF/UHF SWR/Power Meter Covers 144 and 440MHz, rated up to 200W. Easy to read multi-colored meter shows SWR/POWER in three ranges: 15, 60, and 200W. Insertion loss is 0.3 dB or less. Measures only 3.75" w x 3" h x 1.25" d – great to take along for portable, HT or mobile rigs ..... **\$69.99**



**GrandMaster™** 3.25" x 1.25" meter, forward/reflected. 3 ranges. 13.8V/110V. 7.5" w x 3.125" h x 4.25" d.

**870** (HF range) Covers 1.6 to 60MHz. Power ranges: 30/300/3000W ..... **\$124.99**

**872** (HF/VHF range) Covers 1.8 to 200MHz. Power ranges: 5/20/200W ..... **\$94.99**

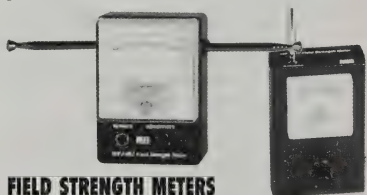
**873** (VHF/UHF range) Covers 125 to 525MHz. Power ranges: 5/20/200W ..... **\$104.99**

**874** (HF/VHF/UHF range) Covers 1.8 to 525MHz. Power ranges: 5/20/200W ..... **\$159.99**



**267** Precision SWR/Wattmeter with Dry Dummy Load 3", lit, cross-needle meter shows true-peak, average forward/reflected power and SWR. • 1.8-54MHz • 300/3000W forward, 60/600W reflected – SWR 1:1 to 8:1 • Load-to-antenna switchable. 50Ω dummy load rated at 100W (10 min.) or 1.5kW (10 sec.). • Usable up to 60MHz • SWR 1.3:1 @ 30MHz. 12VDC lamp or 120VAC with 1312D or 9V battery. Aluminum, perforated • 4" w x 3.125" h x 10" d..... **\$139.99**

3000W forward, 60/600W reflected – SWR 1:1 to 8:1 • Load-to-antenna switchable. 50Ω dummy load rated at 100W (10 min.) or 1.5kW (10 sec.). • Usable up to 60MHz • SWR 1.3:1 @ 30MHz. 12VDC lamp or 120VAC with 1312D or 9V battery. Aluminum, perforated • 4" w x 3.125" h x 10" d..... **\$139.99**



## FIELD STRENGTH METERS

**801** Super Compact Field Strength Meter (right) You can read relative field strength from your antenna, measure antenna performance and discover how strong your antenna field is. Its compact size fits in the palm of your hand, only 2.375" w x 3.625" h x 1" d. Telescopic whip included... **\$19.99**

**802** Bipolar Field Strength Meter (left) Dual whips are included, 2.375" w x 4" h x 1.5" d..... **\$39.99**



## MISCELLANEOUS

**850** Line Voltage Monitor (left) Plug into any 110V AC outlet and monitor the line voltage on an expanded/colored 95 to 135V AC scale. Measures 2.25" w x 2.25" h x 1.5" d.... **\$19.99**

**204B** Antenna Bridge (right) Quickly optimize 1.8-30MHz antennas for peak performance. Portable. Determine if an antenna is too long or short, measure resonate frequency and resistance to 500Ω. Built-in resistance bridge, null meter and oscillator driver. Requires 9V. 4" h x 2" w x 2" d..... **\$79.99**



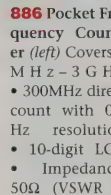
**224** 2M FM Signal Analyzer™ Measure signal strength over 60dB range, antenna gain, beamwidth, front-to-back ratio, sidelobe, feed-line loss. Check and set FM deviation. Plot field strength patterns, position antenna, measure preamp gain, tune transmitters and filters. Scope to analyze modulation wave forms, measure audio distortion, noise and peak deviation. Covers 143.5-148.5MHz. Headphone jack, battery (9V) check function. 4" x 2.5" x 6.75" ..... **\$149.99**



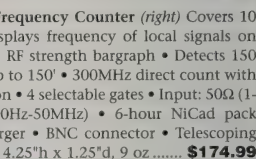
**852** Power Line Noise Meter Sensitive (0.3 uV) superhet AM receiver with wide range noise level meter and AGC (over 70dB). Tuned to the 135MHz region. Telescopic, direction-finding dipole antenna is balun isolated and optimized to give a clearly defined null for pin-pointing sources. Plug in headphones and hear the trackable noise or plug in a tape recorder to document offending noise for playback. 9V battery. 2.8" w x 4" h x 1.5" d. **\$89.99**



**805** Pocket-Sized RFI Detector Track down and eliminate RFI caused by radiating cables and wires. Simply clamp the top mounted current transformer over suspected cable or wire (up to 1/4 inch diameter) to detect RFI causing common-mode currents. Usable from VLF to VHF. Uses 9V battery. 2.25" h x 4.75" h x 1" d..... **\$79.99**



**886** Pocket Frequency Counter (left) Covers 1 MHz – 3 GHz • 300MHz direct count with 0.1 Hz resolution • 10-digit LCD • Impedance: 50Ω (VSWR @ <2:1) • Sensitivity: 0.8mV @ 100MHz, 7mV @ 300MHz, 6mV @ 1GHz, 100mV @ 2.3 GHz • 15 dBm input • Synchronous detector • RF signal strength bargraph • 4 selectable gates • 6-hour, rechargeable NiCads • AC adapter • Telescoping antenna • 2.75" w x 3.25" d x 1.25" d ..... **\$109.99**

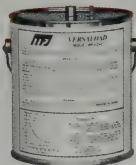
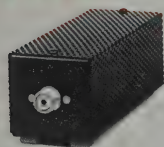


**888** Deluxe Frequency Counter (right) Covers 10 Hz-3GHz • Displays frequency of local signals on 10-digit LCD • RF strength bargraph • Detects 150 MHz signals up to 150° • 300MHz direct count with 0.1Hz resolution • 4 selectable gates • Input: 50Ω (1-3MHz), 1Ω (10Hz-50MHz) • 6-hour NiCad pack • AC wall charger • BNC connector • Telescoping whip • 2.75" x 4.25" h x 1.25" d, 9 oz. .... **\$174.99**



**854** RF Current Meter A top-mounted sense coil snaps over wires, cables, etc. up to 1/2" dia. • Measures actual RF currents in antenna elements, ground wires, radials and outside of coax feedlines • Six ranges, 30mA to 3A • Accurate from 1-30MHz • Range with variable sensitivity control • Auto-off press-to-test power circuit • All-aluminum case and G-10 PC board • 2.5" w x 5.5" h x 1.5" d, 11 oz. .... **\$89.99**





## DUMMY LOADS

**250** Versaload (right) 50Ω oil-filled dummy load providing low VSWR to 400 MHz. Rated at 1 KW CW or 2KW PEP for 10 min., with 50% power rating for 20 minutes and 200W CW (400W PEP) continuous. 7.25" h x 6.625" diameter **With oil \$59.99**

**250X** Same as above, but requires oil..... **\$39.99**

**Dry Loads (left)** Air cooled, non-inductive 50Ω resistor mounted in a metal housing. Full rated load for 30 seconds with derating curve to 5 minutes.

**260C** (HF/VHF) Rated at 300W. 1:1 SWR to 30MHz, .5:1 to 650MHz. 2.5" x 2.5" x 7" ... **\$34.99**

**260CN** With type "N" connectors ..... **\$39.99**

**264** (UHF) Performs from 1.3 to 650MHz, usable to 750MHz. Rated at 1.5KW for 10-seconds and 100W for 10-minutes. 3" w x 3" h x 9" d ..... **\$69.99**

**264N** With type "N" connectors ..... **\$74.99**

## MIRAGE

**MP-3** Measures RMS, peak forward and reverse power and SWR, directly without charts or calculations • Negligible insertion loss. • 420-450MHz • 5/50/150W PEP • Removable coupler, SO-239 connectors • Requires 9V or AC adapter • 5.75" x 4.5" w x 5.75" d, 3.5 lbs ..... **Closeout \$229.99**



## YAESU



**YS-60** Monitors average (CW) and peak (SSB) transmitter power and VSWR. Covers 1.8 to 60MHz, up to 2KW. Ranges: 0/200 and 2000W PEP. 50Ω impd., SO-239 connectors. Requires 12V DC for lamps and internal circuits. 4.75" w x 2.75" h x 3.5" d, 1.5 lbs ..... **\$129.99**

**YS-500** Similar to YS-60, but covers 140-525MHz and has 4/20 and 200W PEP ranges ..... **\$109.99**



**NOCC-3** Cyclops Compact™ At 16 ounces, the NOCC3 compact Night Vision monocular boasts a powerful integrated infrared illuminator in one of the lightest body styles available. With easy to operate power and IR controls, both with indicator lights, the NOCC-3 is equipped with a 42mm objective operating at a 1:1.2 aperture with 3.1x magnification for quality nocturnal viewing. • Image Tube Gain: 15,000 • 628' FOV @ 1000 yards • 575' range of view • Focusing range: 8' to infinity • 2 AA batteries • 7.2" x 2.4" x 3.2" • 16 oz ..... **\$139.99**

**NODS-5** Night Owl Discovery Pro™ A full-sized night vision monocular with the highest-grade 48mm camera quality objective lens providing unsurpassed resolution for distant visibility. The NODS-5 features an integrated infrared illuminator encased in an attractive, ergonomic body. Equipped with soft-touch controls, power and IR indicators and a tripod mount. • Range of view: 650' • Magnification: 5X • 80mm focal length • 524' FOV @ 1000 yards • Focus range: 10' to infinity • Uses 2 AA batteries • 7.6" x 3.4" x 2.9" • 1.5 lbs ..... **\$249.99**

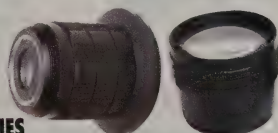


**NOXG-2** Explorer G2™ Cutting edge, with a technologically advanced night vision intensifier tube. Gives superior brightness and performance in low light conditions, and up to 2,300' long range of view. Compact, 100% waterproof – floats! Equipped standard with a powerful integrated infrared illuminator. • Range of view: 2,300' • Magnification: 3.0X • Field of view: 612' @ 1000 yards • Focusing range: 8' to infinity • Uses 3V lithium battery • 6.8" x 2.3" x 3.3" • 1.3 lbs ..... **\$899.99**

## ACCESSORIES

**NOCA-42** Camera Adapter™ (left) Allows photography with 35mm SLR cameras. Replaces rear ocular lens. Requires opt. T-mount adapter ..... **\$39.99**

**NOLD-20** Lens Doubler™ Increases the magnification on the NOCC-3 enabling close-up viewing in the dark. Fits in front of objective lens ..... **\$39.99**



**11015** Celestar 8 Engineered for optical performance in an affordable, full-featured Schmidt-Cassegrain scope with large enough aperture to do serious deep-sky observing. Features: 8" (203mm) aperture • 2032mm focal length • f/10 focal ratio • 6x30 finderscope • Standard 1.25" accessories including 25mm SMA eyepiece (81x), Star diagonal and visual back • Fork mount & wedgpad • 41 lbs. .... **C/O \$999.99**



Take the best of the NexStar 5 and 8 to the next level with the 5i and 8i. Equipped with the electronic hand control, they allow manual slew across the sky in seconds or tracking of a star as the Earth rotates. The control also offers movement of the scopes at six different rates and has a "double button" feature to increase slew speed without changing rates. Put the power of the newest software and expanded 40,000 object database to work with the optional computerized hand control. Capable of becoming fully automatic GPS scopes with optional GPS accessory and computerized hand control.

**11033** NexStar 5i Standard features include • 5" (127mm) diameter, 1250mm focal length, f/10 focal ratio • 60°/sec. slew • Fully enclosed HD high speed motors • Battery compartment for 8 AA's • Star-bright™ coated, Schmidt-Cassegrain optics • Multi-coated, 1.25"/25mm Plössl eyepiece (50x) • Star-Pointer finderscope • 1.25" star diagonal • Auto-Guider port • Auxiliary port for accessories • Heavy-duty base with rubber feet ..... **\$899.99**

**11021** NexStar 8i Same features as 5i with • 2032 mm focal length, f/10, 8" (203mm) dia. • Multi-coated, 1.25" Plössl eyepiece (81x) ..... **\$1199.99**

**11052** NexStar 8 GPS Ultimate in "go-to" technology and astro-imaging, this 8" Schmidt-Cassegrain boasts an integrated GPS and electronic compass, combined with the NexStar™ system. As it turns on, GPS/compass system automatically points to the first alignment star. Auto guider port • 2 auxiliary ports • PC port/RS232 compatible • GPS align mode • 2000mm focal length (f/10) • 5-step multi-layer StarBright™ coatings • 40mm NexStar Plössl (50x) • 9x50 finderscope • Fastar compatible • External 12V DC • AC adapter ..... **\$1999.99**







**11053 NexStar 11 GPS** A large aperture telescope with carbon fiber tube, integrated GPS and electronic compass. When turned on, the GPS/compass system automatically pinpoints exact location and points to the first alignment star. The NexStar offers a 40,000+ object database and storage for numerous, user-defined objects. It also features database filter limits for creating custom lists. Built with dual aluminum fork arms with carrying handles and a receptacle for computer go-to control. 279mm (11") f/10. Schmidt-Cassegrain • 2800mm focal length • f/10 ratio • Premium 40mm (70x) 1.25" Plössl eyepiece • 9x50 finderscope • 9 slow speeds • Star diagonal • Visual back • RS232 and multiple data ports • AC adapter • Adjustable, 26-pound tripod • 65 lbs ..... **\$2999.99**

#### 21016

**Advanced C4-R** Designed for the more advanced astronomer, it features exquisite optics on a heavy-duty equatorial mount. The optics are made to exacting standards, with high quality materials to ensure top performance. Offers a 63% increase in image brightness over 80mm models, with the larger aperture delivering incredible images of the moon, Saturn and its ring structure, Jupiter and its belts, and hundreds of deep-sky objects; including galaxies, nebulae and star clusters • 102mm refractor • 1000mm focal length (f/10) • Mount with setting circles and slow motion cable • 6x30 finderscope • 20mm (50x) 1.25" Plössl eyepiece • Adjustable aluminum tripod and accessory tray ..... **\$429.99**

#### 21019 C6-R

**Achromatic Refractor** An excellent choice for the serious astronomer, the C6-R is the largest telescope in its class with over 6 times the light gathering ability of a 60mm. It features premium accessories such as a heavy duty CG-5 German equatorial mount, 9x50 finderscope with bi-directional alignment screws and a spring loaded pivot support, 20mm (60x) Plössl 1.25" eyepiece, 2" focuser and 2x Barlow with photo adapter. The new German Equatorial mount has precision worm gears on both axes for extremely smooth stability. It also has a convenient latitude scale for easier alignment and an optional polar finder scope for precision alignments. A New heavy-duty tripod with more substantial legs offers excellent damping characteristics. • 150mm (6.0") refractor • 1200mm f/8 focal length • Right ascension and declination setting circles • Slow motion control knobs on both axes • 1.25" star diagonal • The Sky I CD • Accessory Tray • 57 lbs ..... **\$799.99**



**21052 FirstScope 60AZ** (top) All glass components, coated optics and smooth functioning mounts, with the added benefit of slow motion controls on the mount for easy adjustments. • 60mm (2.4") refractor • 700mm focal length, f/12 • Slow motion control rod for smooth vertical adjustments • Sturdy adjustable aluminum tripod with tray • 1.25" 20mm (35x), 10mm (70x) eyepieces • 1.5x erect image eyepiece • 90° star diagonal (1.25") • StarPointer™ finderscope • Alta-zimuth mount • The Sky I CD • 7 lbs ..... **\$99.99**

**21086 FirstScope 80EQ** (bottom) A good choice for the more serious beginning astronomer. The setting circles and slow motion controls allow for greater control in both locating and tracking objects, making this equatorial telescope one you can grow with as your observing interests expand. All glass components, German equatorial mount. • 80mm (3.1") refractor • 900mm focal length, f/11 • Equatorial mount with setting circles and slow motion adjustment cables • Sturdy adjustable aluminum tripod with accessory tray • 1.25" 20mm (45x), 10mm (90x) eyepieces • 90° star diagonal (1.25") • StarPointer™ finderscope • The Sky I CD • 18 lbs .. **\$299.99**



with its rings plainly visible, some deep sky objects, plus terrestrial views. Comes with a fully-computerized hand control with database of over 4,000 objects. Includes three 1.25" eyepieces (35x, 70x and 175x). With a pre-assembled, adjustable tripod, the 60GT can be up and ready in a matter of minutes. A StarPointer finderscope with red LED makes centering easy. • 60mm (2.4") dia. refractor • 700mm focal length • f/12 ratio • 1.25" star diagonal • The Sky Level I CD-ROM • 9.5 lbs..... **\$249.99**



than 60mm. This short-tube, 400mm focal length, refractor telescope has 16x (25mm) and 40x (10mm) magnification, 1.25" SMA eyepieces. • 80mm (3.1") dia. • f/5 ratio • "Go-to" computer hand control • StarPointer™ finderscope • 1.25" star diagonal • The Sky Level I CD • Adjustable aluminum tripod, accessory tray • 11 lbs..... **\$329.99**

#### 22082 NexStar 80GT

With an 80mm aperture and 3.25" field of view, the 80GT is capable of capturing the largest deep-sky objects. 80% brighter views



number of the Messier objects. Explore fainter objects using the light-gathering, 5" primary mirror, which gives fully color-corrected views. • 130mm (5") Newtonian reflector • 650mm focal length (f/5) • Motorized altazimuth mount • 1.25" 25mm (26x), 10mm (65x) eyepieces • Computerized hand control • StarPointer™ finderscope • NSOL control software for PC • Adjustable aluminum tripod with tray • The Sky I CD • 18 lbs ..... **\$399.99**

#### 31034 Tabletop 76

Small, but powerful, this ultra portable tabletop telescope is ideal for traveling & quick set-up. The handy but sturdy table top mount provides steady viewing. • 76mm (3") aperture • 600mm focal length • f/8 focal ratio. Standard 0.96" accessories include: 4mm SR (150x), 20mm H (30x) and 2x Barlow eyepieces • 5x24 right-angle Finderscope • 5 lbs ..... **\$99.99**



**31044 Firstscope 114** High quality, telescope featuring an optical system for bright, detailed views. The highly stable equatorial mount (CG-3) has setting circles and slow motion controls on both axes providing smooth, easy tracking. Built to provide years of performance, it comes with adjustable, aluminum tripod and accessory tray. • 114mm (4.5") diameter aperture • 900mm focal length • f/8 ratio • StarPointer™ finderscope • 20mm (45x) and 10mm (90x) Kellner eyepieces • 1.25" focuser • 35" optical tube • Enhanced aluminum optical coatings • 1.5" rack and pinion focusing • 45 lbs..... **\$249.99**

**31056 C6N** Mounted on a rigid CG-4 equatorial mount. Counterweight, latitude scale, setting circles and slow motion controls on axes are standard. • 150mm (6.0") aperture • 1000mm focal length • f/7 focal ratio • 1.25" accessories include: 20mm Plössl eyepiece (50x) and focuser • 6x30 finderscope • CG-4 EQ mount • Adjustable metal tripod, accessory tray • 41 lbs ..... **\$399.99**





**31142 NexStar 114GT** Computer compatible Newtonian reflector with a compact design and exceptional light-gathering ability. • 114 mm (4.5") diameter • 1000mm focal length (f/9) • StarPointer™



finderscope • 25mm (40X) and 10mm (100X) SMA eyepieces • Motorized mount • Computerized hand controller with "go-to" database. Includes GuideStar™ software to use with your personal computer, fully assembled adjustable aluminum tripod, battery pack and The Sky Level 1 CD-ROM... **\$439.99**

## LAB GRADE MICROSCOPES

### 4020 Dissecting Microscope

This provides an introduction to the world of microscopy. It uses a 45° inclined, 360° rotatable monocular head which can move up and down on the metal pillar for small or large item viewing. The eyepiece is a 10x-18mm with a 4x-58mm objective, giving 40x power. The all-metal unit comes with a 60mm black-and-white viewing plate and smooth rack and pinion focuser **\$79.99**



**4030 Educational Microscope** Feature-packed and a great educational tool. It has a fully coated optical system, with H10x and H12.5x eyepieces and 35mm 4x, 10x, 40x objectives giving powers of (40x, 100x, 400x) 10x and (50x, 125x and 500x) 12.5x. This unit uses positive click stops on the turret, a five aperture diaphragm, a plano-concave 50mm mirror, and a smooth rack and pinion focuser with a safety rack stop..... **\$119.99**



**4050 Biological Microscope** Using fully coated optics, with a mechanical tube length of 160mm, its achromatic objective promises great observing sessions. The unit has a monocular 45° inclined, 360° rotatable head, positive click stop nosepiece with three objectives, 4x, 10x, 40x, a metal 110mm x 120mm stage and a five aperture diaphragm. It uses coarse and fine focus with electrical illumination with a tungsten 20w bulb and .65 single lens condenser. Powers are 40x, 100x and 400x using the 10x eyepiece..... **\$199.99**



## SPOTTING SCOPES

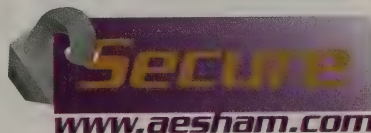
**52200 (top) 60mm Pro Zoom Spotting Scope** This powerful spotting scope's large 60mm aperture makes it perfect for bird watching, photography, nature study, hunting or scenic observing. Carefully crafted, multicoated optics provide excellent contrast and clarity, and the standard lens hood reduces glare. Zoom and focus controls are exceptionally smooth, convenient and easy to use. The ability to zoom from 15 to 60 power with speed and precision means you'll be able to focus on and follow interesting subjects with ease. • 24" near focus at 15 power • 15mm eye relief at 15 power • 30° field of view at 15 power ..... **\$199.99**

**52211 (bottom) 60mm Wildlife Zoom Spotting Scope** A great all-around optic designed to perform well in a range of viewing situations. Great for bird watching, observing nature and long distance spotting. The focus and zoom controls are easy to use and well placed for fast, convenient image acquisition. It offers long eye relief of 33mm at 15 power. With fully coated lenses, it's totally reliable and an excellent performer. • Power range that zooms from 15 to 45 power • Near focus: 42" at 15 power • Field of view: 2.25° at 15 power • Mini table tripod and carrying case included • 25 oz..... **\$169.99**



## TELESCOPES

**0705-04-01 ETX-70AT 70mm Achromatic Refractor** Excellent portable for beginners. Observe major planets easily. Also great for birdwatchers or naturalists. • 2 eyepieces (MA 9mm/39x and MA 25mm/ 14x) • Multi-layer coated, achromatic optical tube assembly (D=70mm, F=350mm f/5) • Internal flip-mirror system for either straight or 90° observing • Fork mount with electric slow motion controls, setting circles and locks on both axes • Electronic control panel • 9-speed, dual-axis motor drive system with Autostar™ control • Sidereal-rate tracking • Requires 6 AA's • Includes #882 tripod • 7 lbs..... **\$319.99**



**3514-03-20 ETX-90AT 90mm Maksutov-Cassegrain (left)** The perfect ultraportable field telescope. • 8x25mm right-angle viewfinder • Series 4000 Super Plossl 26mm eyepiece (1.25") • Super multi-coated optical tube assembly (D=90mm, F=1250mm f/13.8) • Internal flip-

mirror system for straight or 90° observing • Fork mount with electric slow-motion controls, setting circles and locks on both axes • Electronic control panel • 4-speed (8x, 32x sideral, 0.75°/sec, 5°/sec), dual-axis motor drive system with electronic hand controller • 8 "AA" batteries required • 19 lbs. Includes Autostar controller and tripod. **\$599.99**

**0515-03-20 ETX-125AT 138mm Maksutov-Cassegrain (right)** Same as above, but with larger optical assembly (D=127, F=1900mm f/15 and 8x25mm right angle viewer. Includes AutoStar controller and tripod..... **\$999.99**



**20201 NGC-60 Refractor** New Generation offers an improvement in design. Includes built-in AutoStar computer control system and manual slow-motion controls. • 60mm (2.4") diameter, f/11.7 ratio, 700mm focal length • Self-guided "go-to" control system offers 1400-object database • Altazimuth mount with slow-motion control (oversize bearings on both axes for greater stability and precision) • MA25mm and MA9mm 1.25" eyepieces • 5 x 24mm viewfinder • Hybrid diagonal • StarNavigator software • Adjustable sliding aluminum tripod with accessory shelf • Requires 2 AA batteries (not included)..... **\$199.99**



**20117 DS-2114-ATS Reflector** The Meade AutoStar control system has the commanding lead in automated telescope technology. Control system includes AutoStar with 9-speed controller and "go-to" capability to any of over 1400 celestial

objects. Includes internalized motors, cords, gears and battery compartment (requires 8 AA batteries). • 114mm (4.5") diameter • f/8.8 ratio • 1000mm focal length • 2" focuser • New streamlined, single-line fork altazimuth mount provides smoother more rigid motions in altitude and azimuth • MA25 mm and MA9mm 1.25" eyepieces • 1.25" and 2" eyepiece holders • 6 x 30mm viewfinder with rubber eyecup • StarNavigator software • Quick release adjustable aluminum tripod..... **\$399.99**

## TELESCOPE ACCESSORIES

**07137 Plossl 5mm (1.25") O.D. eyepiece. \$59.99**  
**07139 8mm WA (1.25") eyepiece..... 69.99**



# BUSHNELL

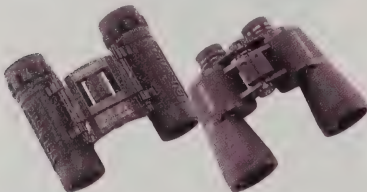


## BINOCULARS

**Powerview®** Truly the "best of both worlds." Contemporary styling and design combined with legendary Bushnell quality and durability. The easy-to-hold and easy-to-use aspect of these binoculars also converge to make Bushnell Powerview binoculars an excellent value for the general and outdoor user. Powerview comes with soft rubber covering and the patented "Insta-Focus®" system. Each binocular comes with a neck strap and carrying case.

**13-1226 (left)** Compact binocular with folding roof prism. Designed in camo. Features include: 12x25 magnification • 240 ft. field of view at 1000 yds. • 2.1mm exit pupil • 9.7oz..... **\$29.99**

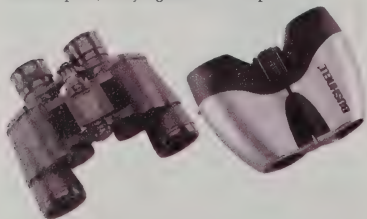
**13-0430 (right)** LiteVision™ • 4x30 magnification • 650 ft. field of view at 1000 yds. • 7.5mm exit pupil • 7.5oz..... **\$13.99**



**13-1250 (right)** InstaFocus® • 12x50 magnification • Porro prism • 265' field of view (1000 yds.) • 4.2 mm exit pupil • Adapts to tripod • 27oz.... **\$59.99**

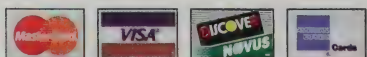
**13-2514 (left)** Compact, folding binocular • 8x21 magnification • Roof prism • 375 ft. field of view at 1000 yds. • 2.6mm exit pupil • 7oz..... **\$21.99**

Falcon is feature packed and value priced. Perfect for sporting events, sightseeing, nature study, backpacking, concerts and theater. The line includes the Bushnell patented InstaFocus® focusing system, coated optics, carrying case and strap.



**13-0721 (right)** Compact binocular featuring 7x21 magnification • Porro prism • 340 ft. field of view • 3mm exit pupil • 4.7oz..... **Closeout \$24.99**

**13-3410 (left)** InstaFocus® • 7x35 magnification • Porro prism • 420' field of view (1000 yds.) • 5mm exit pupil • Adapts to tripod • 21oz..... **\$29.99**



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## TELESCOPES

**Voyager® Series**  
Engineered to exacting standards with exclusive features: the first astronomical zoom telescope • Penta mirror technology that yields right to left correct views of the night sky • High quality metal easy-track and metal equatorial mounts • Innovative adjustable aluminum tripods • Exclusive rotary power turret eyepieces.

**78-2010** Penta mirror technology that yields right to left correct views • High quality metal easy-track and metal equatorial mounts • Exclusive rotary turret eyepieces • 100 x 4.5" reflector • Focal length: 500mm • 5 and 27mm Plossl eyepieces • Magnification: 18 and 100 • 1.25" format eyepieces • Precision rack and pinion focuser • Convenient shoulder strap • Pre-assembled cradle mount • Camera and tripod adaptability..... **\$179.99**



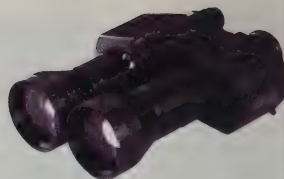
**78-9470 (top)** 60mm refractor • Focal length: 750 • Zoom, 8, 15mm eyepieces • Magnifications: 50, 94, 50-150, 250, 470 • Penta mirror • Easy Track® mount • Adjust. tripod..... **\$129.99**

**78-9675 (bottom)** 4.5" reflector • Focal length: 900 • 4, 12, 20mm eyepieces • Magnifications: 45, 75, 135, 225, 675 • Clock drive equatorial mount • Adjustable aluminum tripod • 6-point finderscope mount • Fine tracking..... **Closeout \$199.99**

## TELESCOPE ACCESSORIES

(See Price Guide to match accessories to correct telescope model)

**78-0101** 1.25", 9mm Kellner eyepiece..... **\$29.99**  
**78-0102** 1.25", 25mm Kellner eyepiece... **\$29.99**  
**78-0103** 1.25" format erecting prism ..... **\$69.99**  
**78-0105** 1.25" format 2x Barlow lens..... **\$39.99**  
**78-0106** Clock drive (DC/battery power) **\$89.99**



## MISCELLANEOUS

**26-3150** NightVision Binocular (Generation 1) Great for wild-life observation, maritime navigation, security or camping. Built-in infrared illuminator for enhanced images in very low light. Powered by a single CR123A battery. • Magnification x objective lens: 3.1 x 50mm • Range: 1.5 to 400 ft. • 79 ft. field of view @ 100 yds • Includes tripod mount • 7.9" x 6.45" x 2.7", 40 oz.... **\$459.99**



**10-1907** Speedster™ Speed Gun Multi-functional, for all kinds of sports enthusiasts! Tracks miles, or kilometers, per hour of everything from pitching speeds, tennis serves and downhill racers to cars at the race track. Measures the speed of a baseball at 6-110mph from over 90 feet away and the speed of a race car from 6-200mph at over 1300 feet away. Displays current, last and average speeds. Tracks baseball statistics for up to 8 pitchers. Features highly legible, 4-row LCD graphics display, trigger and 2-way button pad..... **\$199.99**



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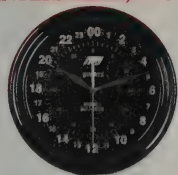
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407-585-7388  
1-800-321-3594

621 Commonwealth Ave.  
Orlando, FL 32803  
407-994-3128  
1-800-327-1917

4640 South Polaris Ave.  
Las Vegas, NV 89103  
702-647-3114  
1-800-634-4227



**105C** 24 Hour Quartz Wall Clock Black, 10" diameter face, sweep second hand. Uses one "AA" battery ..... **\$19.99**



**Small 24-Hour Clocks** A dual clock with separate UTC and local time display modules, and a single clock with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included.

**107B** (left) Single, 2.25" w x 1" h x 2" d ..... **\$9.99**  
**108B** (right) Dual, 4.25" w x 1" h x 2" d ..... **\$19.99**



**112B** DX'er's World Map Clock Shows time at any QTH throughout the world on an attractive LCD world map. Also shows day, month, date and year. Choose 12 or 24 hour. Daylight saving time feature. Grey, cool bile backlight for night viewing 4.25" w x 3.3" h x 2.25" d ..... **\$24.99**



**113** 12/24 Hour Desk Clock Switchable 12/24 hour display • 9-minute ID timer • Alarm function • 9V battery back-up for power failures • 110 VAC, 60Hz • 9" w x 4" h x 2.5" d ..... **\$19.99**

**115** WORLD Map 24 hour Quartz Wall Clock Set it to GMT and you'll know what time it is in designated areas of the world any time of day. Premier cities outline the trim of the 12" diameter. Operates on "AA" battery (not included) .. **\$24.99**



**116DC** 12 VDC, 12 Hour LCD Travel Alarm Clock Great for motor homes and trucks! Green 5/8" LED digits show 12 hour time format. Ten minute ID buzz, two-level alarm (100dB - high) low/high @ 110dB 9V back-up battery. Power cord with cigarette lighter adapter attached. Compact, 4.5" w x 2" h x 4" d, 17 oz. **Closeout \$9.99**



**118** Jumbo LCD™ 24 or 12-hour clock 1.25" high with high contrast LCD. Shows year, month, date and day in four different languages. Includes 100 year calendar and flip stand. Uses one "AAA" batt. (not incl.). 5.75" h x 3.375" w x 0.5" d ..... **\$24.99**

**123** Eternity Atomic Clock™ Solar powered and automatic time set by radio signals received from WWVB. Large (6.75" w x 2" h) LCD display, selectable 12/24 hour time format, digital calendar. Ordinary room light powers the solar cells and also replenishes a built-in rechargeable battery; also uses (2) "AAA" batteries (not included) for back-up power. Metallic tan, 9" w x 3.5" h. **\$79.99**



**125** DX'er's Dream 24-hour Quartz Wall Clock 12" diameter face shows 24 hour format with smaller day, date and 12 hour indicators. All dials set independently as desired. Uses a single "AA" battery (not included) ..... **\$29.99**

*Benjamin Michael Industries* INC.

**973A** Battery operated 24-hour quartz controlled clock with sweep-second hand. 12" dial allows excellent visibility. Black textured case and glass crystal. Uses AA battery (not incl.). 14" dia. x 1.75" d. **\$49.99**



**972AD** 14" dia., 12/24 hr. wall clock, sweep-second hand. Uses "AA" battery (not included) .... **\$32.99**

**RCA**

**NEW**



**RP-3710** Dual Wake Digital Tuning AM/FM Clock Radio Two independent "wake time" readouts - display indicates both time settings • Graduwake™ ramp-up alarm • Snooze • Large, backlit LCD with brightness control • 11 presets - mix AM/FM stations plus your choice of 1 preset wake station. Sleep to one station, wake up to another • 9V back-up battery (not included) holds time and alarm settings in memory for 8 hours • Operates on 2 AA batteries, included • 5.25" w x 4" h x 3.75" d ..... **\$24.99**

**GET** CONNECT SYSTEMS INC.

**INTERCONNECTS**

Fully automatic interface between an FM base radio and phone line to initiate and receive phone calls on a mobile or HT. Each contains powerful, micro-processor-controlled features such as 90 memory speed dialer, redial, built-in programming keyboard and digital readout, remote base mode, regenerated tone or pulse dialout, CW ID and toll restrict.

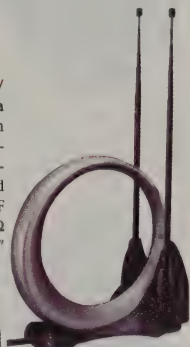


**CS-800** Full Duplex Interconnect Operates full or semi-duplex and also has a built-in repeater controller. Simply connects to transceiver mic and speaker jacks. FCC and DOC approved. 12-15 VDC. 7.875" w x 7.5" d x 2" h, 2.5 lbs. .... **\$369.99**

**CS-900** Control Station Simplex Interconnect For use with any simplex transceiver. Also use thru remotely located repeaters (from base) for added range. Digital voice delay standard. Connects to mic and speaker jacks of simplex transceiver. FCC and DOC approved. Looks like CS-800. (Transceiver switching speed does not affect performance) 12-15VDC 7.9" w x 7.5" d x 2" h, 2.5 lbs. .... **\$369.99**

**RCA**

**ANT-1020** VHF/UHF/FM Indoor TV Antenna Contemporary design with no-scaff pad to protect cabinet tops. • 39-inch retractable and adjustable dipoles • UHF loop • Integrated 75Ω hook-up cable with "F" connector. .... **\$19.99**



**TA-25** Eagle Aspen™ TV Distribution Amplifier Excellent for home and small MATV systems! UHF, VHF, FM • 54-890MHz • Low noise, typ. 6-7dB • 25dB gain • Switchable FM trap • Lightning protection • 6" w x 3" h x 1.75" d • 117 VAC, 4.5W ..... **\$19.99**



**STD BLK/GOLD** or **STD OAK/GOLD** A framed, lighted world map which is a continuous belt of mylar film in constant motion synchronized with Earth's orbit. Displays current time world-wide, sunrise/set, and current season everywhere via an illuminated pattern • Allows for calculation of time in non-standard zones • Shortwave radio prefixes • Standard model in black or oak with gold trim • 3' x 2', wall mounting ... **Drop Shipped \$999.99**

Available by Special Order in numerous trims/finishes, and in 3 other models (with analog 0-60 min. scale).



# TERK

## STEREO ANTENNAS

**AF-9330** AM-FM Tower Antenna Built-in amplifier with gain control improves AM and FM reception. Works with tuners and receivers with 75Ω or 300Ω FM antenna inputs. The AM connection consists of a pair of wires with U-clips. Useful 30-40 miles from the broadcast transmitter ..... **\$24.99**



the radio. Position for best reception, then rotate the tuning dial located at the center of the antenna to match the AM frequency tuned in on the radio. For best performance, it may be connected directly to an external AM antenna input..... **\$49.99**



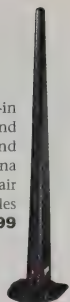
AM loop provides great broadcast band reception. FM output impedance: 75Ω (300Ω with supplied matching transformer), AM: 300Ω. 6" h x 6" w x 1.5" d. AC power adapter included ..... **\$49.99**



multiple TV's. For Dual-LNB dishes, it has two built-in diplexers, providing more than one TV with DSS and VHF/UHF signals. Powered thru the cable by a DSS receiver. Durable, powder-coated element and weather-proof amplifier housing. 10.25" h x 21.25" w x 3.5" d ..... **\$59.99**



**TV-55** Amplified Out/Indoor TV Antenna Uses a helical, coiled broadband single element engineered for clear, powerful reception of HDTV broadcasts. Receives both UHF and VHF frequencies from 54-806MHz. Built-in ultra-low noise 10dB amplifier can be switched in or out for best reception. Mounts in or outdoors. Includes a 12V adapter and mounting hardware. 46" w x 3.5" h x 2.25" d..... **\$89.99**



**AM-1000** External AM Antenna A passive, adjustable 530-1600kHz AM antenna that improves reception over built-in loops. It is used unattached, next to the radio. Position for best reception, then rotate the tuning dial located at the center of the antenna to match the AM frequency tuned in on the radio. For best performance, it may be connected directly to an external AM antenna input..... **\$49.99**

**PI-B** Powered Indoor AM/FM Antenna Improves FM (88-108MHz) performance by eliminating multipath interference and providing amplification from the built-in low-noise preamplifier with gain control. An adjustable position

## TV ANTENNAS

**TV-42** Amplified Clip-On Antenna Attaches quickly to any 18" satellite dish and adds reception of all local VHF/UHF channels. Covers channels 2-83 and FM broadcast. Built-in internal 10dB gain amplifier to minimize signal loss, allowing distribution to

## TV, A/V ACCESSORIES

**MOD-41** RF Modulator Connect up to four A/V sources to any TV with no available A/V input jacks. Similar to VS-MOD4 below, without S-Video jacks or IR remote control. 6.5" w x 2" h x 4.25" d **\$39.99**



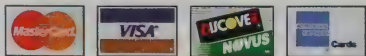
**VS-4MOD** RF Modulator-Plus Allows connections of multiple A/V components to a TV with no available A/V (RCA) input jacks. Provides inputs for up to four A/V sources (video games, DVDs, PVRs, VCRs, satellite receivers and camcorders). Converts A/V sources to VHF for viewing on channel 3 or 4 on any TV. Compatible with your IR remote control to remotely switch between A/V sources. Has "F-type" antenna/cable inputs and RCA/S-Video input/output jacks. 9.75" w x 2" h x 5" d. AC wall adapter included ..... **\$49.99**



**VR-1** TV Volume Regulator Delivers a consistent audio level during commercial breaks, while channel surfing or changing between A/V sources. Advanced DSP automatically adjusts sound levels while noise reduction reduces any 'hiss' present in audio and articulates quiet scenes to a level that you can enjoy. Simple plug and play, one time installation. 3.18" w x 3.87" h x 1.43" d ..... **\$49.99**



**LF-30S** Leapfrog WaveMaster 30 Transmitter/Receiver System An easy-to-use, cost effective alternative to purchasing multiple A/V components. Allows remote control use of A/V signals from one source, such as a TV with satellite or DVD player, to another within your home. Transmits a 2.4GHz band and penetrates walls, doors, ceilings and floors. Built-in IR extender enables use of existing or universal remote to control the system. Built-in modulator ensures connection to old and new TV's. 1.5" h x 7" w x 4.8" d ..... **\$99.99**



We accept I.M.P.A.C.® Government Credit Cards



**LF-20** Leapfrog Wavemaster 20 System Complete transmitter/receiver system that transmits picture and sound from satellite TV, cable, VCR and DVD connections to other TV's to any-

where in the home without wires. Advanced 2.4GHz delivers clearest picture and sound up to 100' away. It features both standard RF connectors and coaxial (RCA) jacks, for connection to any type of TV, as well as audio or A/V components. A/V cables and AC wall adapters included. 3.625" w x 1.625" h x 5.25" d ea..... **\$79.99**

**LF-IRX** Leap Frog Remote Control Range Extender Increase capability of infrared remote controls. Provides the power to operate A/V components through walls and floors up to 100'. Operates on 418 MHz for wireless install. Simply plug base in near controllable unit, then plug the receiver in remote location. Cables and AC adapters included. 5" h x 2.5" w x 4" d ea..... **\$39.99**



**TSP-6** Surge Protector Protects satellite, antenna, cable, and phone lines from surge and spike damage while providing constant EMI/RFI noise filtering for 8 AC outlets. Automatically shuts off if protection fails. • Resettable circuit breaker • Surge and ground protection LEDs • 6' power cord with slim-line plug, 6' TV/satellite and phone cables • Rated 125V @ 15 amps..... **\$29.99**



## TVGuardian™

### TV GUARDIAN

**Foul Language Filter** Easily connects between a television and VCR. It continually monitors closed-captioning embedded in the video signal and references each word against an internal offensive-word-and-phrase directory. Audio is muted on detection of a match. It also removes the word from closed-captioning and replaces it with a profanity-free version. Off, tolerant and strict mode settings. Off, display text during mute only and full closed-captioning caption options. All settings and connections are capable of being secured under lock and key..... **\$89.99**





# Effective Atmospheric Surge Voltage Protection!

Dangerous static charges measuring 1000s of volts can be developed from local thunderstorms, high wind driven snow or sand; so potent they can actually puncture the dielectric of coaxial cable. Solid-state transceivers and other equipment in your ham shack are very vulnerable to these high-voltage charges so you should take every precaution to protect your equipment and shack from possible serious damage... and ALPHA DELTA has the answer!

Special Arc-Plugs are used in ALPHA DELTA's Coax Switches, Surge Protectors and DELTA-C Center Insulator which "bleed off" slow rising static electricity charges from the feed line, routing them harmlessly to ground. This is far more effective than DC grounded baluns or chokes. But, even as effective as these devices are, you still need to pay attention to proper grounding procedures as outlined in the ARRL Handbook and other technical publications.



**Lightning Surge/EMI Protectors**

**UL LISTED** - Certified protection for your equipment from lightning and static charges much more effective than low-cost air-gap types.

The heart of this protector is an Arc-Plug™, two electrodes hermetically sealed in a gas filled ceramic cylinder. Acting like a voltage dependent switch, the Arc-Plug™ can repeatedly carry large currents for brief periods of time. If an excessive voltage appears on the feedline line, due to lightning or static charges, the Arc-Plug™ is energized, forming a momentary arc and discharge to ground which protects your valuable equipment from damage.

After repeated zaps, the Arc-Plug™ may need replacing as indicated by an increased VSWR or reduced receive signal strength. A top mounted "O" ring sealed knurled knob allows easy access and replacement of the Arc-Plug™ without tools.

If you are running control voltages through the coax, the impedance compensated thru-line cavity design allows it to pass thru, instead of having to "wire around" as with some other DC-blocked designs.

**Wide Frequency Range:** DC thru 3 GHz, much wider than narrow band DC blocked or stub designs.  
**Low Insertion Loss:** 0.1dB @ 1 GHz, 0.2dB @ 2 GHz, and only 0.5dB @ 3GHz, typical.

**ATT-3G50\*** has Type-N females connectors, rated up to 3.0 GHz and 200 Watts ..... **\$59.99**

**ATT-3G50U\*** has UHF female connectors, rated up to 500MHz and 200 Watts..... **\$49.99**

\*2000 Watt version available at No Extra Cost - specify ATT-3G50HP or ATT-3G50UHP

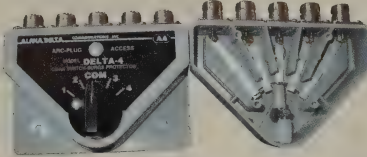


**PathFINDER**

**Digital Auto Tuner**

The ONLY automatic antenna tuner on the market that has front panel switching and circuitry for BOTH Hi-Z (wire-type antennas) and Low-Z (coaxial feed antennas) and full Digital Readout for SWR, power and tuner functions. Huge 10:1 tuning range will match a wider variety of antennas than "built-in" tuners. Covers 1.8 thru 30 MHz plus 6 meters. Requires 12VDC @ 1 amp. .... **\$399.99**

## Lightning Surge Protected Coaxial Switches



- High Quality custom design featuring a rugged Cast Aluminum Housing.
- Constant impedance micro-strip cavities that provide very low-loss and high isolation through the UHF frequencies.
- Solid, positive switching
- Rated for Full Legal power.
- A solid positive detent roller bearing switch snaps positively into each position.
- An Alpha Delta Arc-Plug™ Cartridge provides continuous surge protection. If needed, it is easily replaced from the front without disassembly.
- Automatic grounding of the unused antennas to reduce antenna interaction, noise and the effects of lightning.

**DELTA-2** 2-position, with SO-239 connectors and rated for operation up to 500MHz ..... **\$49.99**

**DELTA-2/N** 2-position, with N-type connectors, rated for operation up to 1.3GHz ..... **\$64.99**

**DELTA-4** 4-position, with SO-239 connectors, rated for operation up to 500MHz ..... **\$79.99**

**DELTA-4/N** 4-position, with N-type connectors, rated for operation up to 1.3GHz ..... **\$89.99**

## PathMINDER

### Digital Desktop Coaxial Switch



A six-position Digitally Controlled coaxial switch. It can switch up to 6 coaxial outputs with the press of soft-touch front panel buttons. Heavy-duty Internal relays handle up to 1500W with very little insertion loss over the 1.8 thru 54 MHz range. Uses SO-239 type connectors. A big feature is that it will not "hot switch" at RF levels above 50W protecting relay contacts or equipment from damage. A micro-processor monitors a radio sensing input and will automatically ground ports, with several grounding options. Requires 12VDC @ 250 mA ... **\$149.99**

## Limited Space Slopers



- Proven 1/4-wave sloper DX Performance
- Alpha Delta "ISO-RES" inductors replace lossy traps and capacitors, handles Full Legal Power.
- Factory assembled using insulated #12 copper wire, stainless hardware and 50 ft. of nylon rope.
- Direct 50Ω coaxial feed, no tuner required. Go to [www.alphadeltacom.com](http://www.alphadeltacom.com) for sloper installation.

**DX-A** A top performing 1/4-wave Twin Sloper 160, 80 and 40 meter DX antenna. Combines the DX fire-power of the 1/4-wave sloper with the wide bandwidth of a 1/2-wave dipole. Installs like an Inverted-V. Legs are 67 ft. and 55 ft. long ..... **\$59.99**

**DX-B** A single wire high performance 1/4-wave DX Sloper with for 160, 80, 40 and 30 meters. Installs like 1/2 of an Inverted V. Convenient limited space installation requires only 60 ft. of space for amazing DX performance with the feed-end at 35 ft. and the low end only 8 ft. above ground ... **\$69.99**

## Shortened Multibanders



- Alpha Delta "ISO-RES" inductors replace lossy traps and capacitors, rated Full Power.
- Direct 50Ω coaxial feed, no tuner required except for extended frequency coverage.
- Factory assembled with insulated #12 copper wire, stainless hardware and 50 ft. of nylon rope.
- Uses a DELTA-C Static Protected center insulator and DELTA-CIN end insulators.
- Install Horizontally as an Inverted-V.

**DX-CC** 80-40-20-15-10M, 82 ft. long..... **\$119.99**

**DX-DD** 80-40M, 82 ft. long ..... **\$89.99**

**DX-EE** 40-20-15-10M plus 30-17-12M using a wide range antenna tuner, 40 ft. long..... **\$99.99**

**DX-LB** 160-80-40M, 100 ft. long. Typical bandwidth for 2:1 VSWR: 160M (20kHz), 80M (40kHz), 40M (300kHz). Full band coverage using a wide range antenna tuner ..... **\$119.99**

**DX-LB PLUS** Same as DX-LB above, but adds 20-10M with parallel wires ..... **\$149.99**

## Full-Size Monoband Dipoles



- 50Ω coax feed, no traps, handles Full Power
- Install Horizontally or as an Inverted V
- Rugged, full-size performance
- Factory assembled with #12 insulated copper wire, DELTA-C static protected center insulator, DELTA-CIN end insulators and includes 50 ft of nylon support rope.

**DX-80** 75/80 meters, 134 ft. long ..... **\$49.99**

**DX-40** 40 meters, 67 ft. long ..... **\$39.99**

**DX-20** 20 meters, 34 ft. long ..... **\$39.99**





# The Performance Antenna

## We Make it Simple ... But GOOD!

Most mobile antenna installations are notoriously inefficient and complex to install. Some are so big and cumbersome, they need guy ropes and special mounts to handle the wind load when under way. Some are single band only, others need a bag full of resonators for multi-band operation. Whips with automatic tuners or "screwdriver" types are nice, but even more cumbersome to install, usually requiring extra wiring and a controller.

The OUTbacker eliminates these "big antenna" problems while providing efficient, multi-band performance in a rugged, lightweight, single whip design. Its sleek, low profile design allows use with standard 3/8-24 bases and trunk-lip mounts.

Fiberglass shaft construction, using a pre-tuned copper helical winding with clearly marked brass band taps at points along its length. A final coating of smooth epoxy resin and polyurethane, gives the OUTbacker a toughness and durability not found in other brands, while making a really good looking mobile installation. Changing bands is a snap; simply plug into the desired band tap and resume operating without changing whips, resonators, or retuning.

MODEL	BANDS	POWER	LENGTH	PRICE
<b>OB-8</b>	75-10M + WARC	300W P.E.P.	6 ft. ....	<b>\$279.99</b>
<b>OB-8HP</b> (HIGH POWER)	75-10M + WARC	500W P.E.P.	6 ft. ....	<b>\$299.99</b>
<b>OB-S8*</b>	75-10M + WARC	300W P.E.P.	6 ft. ....	<b>\$299.99</b>
*Breaks down into two 3 ft. sections, includes a cloth carrying pouch				
<b>OB-8TRI</b>	Same as OB-S8 except it breaks down into three 2 ft. sections, pouch included			<b>\$329.99</b>
<b>PERTH*</b>	75-10M + WARC	150W P.E.P.	7.5 ft. ....	<b>\$289.99</b>
*The Most Efficient model for HF Mobile				
<b>PERTH PLUS*</b>	75-10 + 6/2M + WARC	150W P.E.P.	6 ft. ....	<b>\$299.99</b>
*Perfect for HF Radios with added 6 & 2 meter capability				
<b>STEALTH PLUS*</b>	75-10 + 6/2M + WARC	100W P.E.P.	4 ft. ....	<b>\$269.99</b>
*Perfect for HF Radios with added 6 & 2 meter capability				
<b>OUTREACH*</b>	160-10M + WARC	300W P.E.P.	12 ft. ....	<b>\$399.99</b>
<b>OUTREACH 500*</b>	80-6M + WARC	600W P.E.P.	12 ft. ....	<b>\$439.99</b>
*OUTREACH and OUTREACH 500 perfect for use with the OUTPOST, below				
<b>OB-M*</b>	Marine/HAM*	300W P.E.P.	6 ft. ....	<b>\$399.99</b>
*Marine: 2.182, 4.1, 6.2, 8.2, 12.4, 16.5, 22 MHz • HAM: 75, 40, 20, 17, 10M				
<b>Joey*</b>	80-2M + WARC	20W P.E.P. 50 in.....		<b>\$249.99</b>
*Improves portable performance of FT-817 and other QRP rigs.				
<b>ALP MicroMount</b>	Desktop tripod for Joey, 8 in. tall with 12 ft. counterpoise			<b>\$49.99</b>

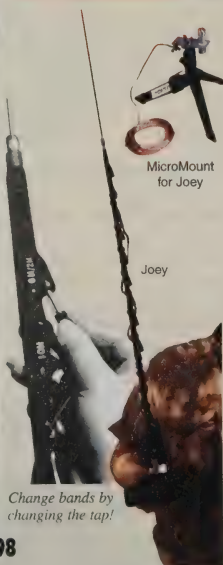


**OUTPOST** Base Tripod Mount for mobile antennas. Pictured with OUTbacker antenna installed, described below. Tripod only, antenna is not included ..... **\$199.99**

## The OUTbacker/Outpost Tripod Antenna System

The Ideal Condo, Limited Space Antenna System  
Providing Incredible DX Performance!

- A convenient method of utilizing OUTBACKERS for Base/Portable operation.
- The OUTbacker **Outreach** (12 ft. tall, 160-10 meters, 300 watts PEP) or the **Outreach 500** (12 ft. tall, 80-6 meters, 600 watts PEP) and the matching Alpha Delta Outpost ground coupler tripod comprise the system.
- Virtually unseen by your neighbors but provides efficient, world class "fixed station" performance.
- Users report multi-band DXCC and WAZ results. On-site comparisons with several large commercial "no radial" trap verticals (your neighbors can see those) have shown that the OUTbacker/Outpost combination works the same or better in most cases. High efficiency comes from careful design with center and 5/8-wave loading over a 12 ft. length and effective use of exclusive band taps. No control wires or motors are required as in some other designs.
- Adding to the efficiency of the system is the "ground coupling" of the Outpost tripod. Its precision designed 36 in. long x 3 in. wide "platypus" ground feet on each leg form a large capacitor with the earth, providing spectacular efficiency and coupling.
- No radials, cement mounting or tools are required. Just unfold and go! No other base provides such a level of ground coupling or ease of use. Install on patios OR in yards. Even the shorter OUTbacker models perform well on the Outpost.
- Compact, fold-up design sets up quickly and collapses in seconds; no holes, no concrete!
- A mobile-type mount on top accepts a standard 3/8-24 antenna stud and PL-259 connector.
- A fold-over top bracket, allows the antenna to be easily removed or folded down for changing bands, or to be out of view.
- Rugged 6061-T6 aircraft aluminum members, 18 lbs. Stainless steel hardware and wing nuts, comes all assembled.



Change bands by  
changing the tap!



## HT RANGE EXTENDERS

**1714 Long Ranger™ 2M Halfwave** For really long range, this MFJ end-fed half-wave is hard to beat. It outperforms a 5/8 wave on a handheld because it does not need a ground plane. The 1714 is shorter (40" extended), lighter, has more gain & places less stress on your antenna connector. When collapsed (10.5"), it performs like a rubber duck ... **\$16.99**

**1712 Dual Bander™ 2M and 440MHz** New dualband handheld or separate units? One antenna fits all. It's 1/4 wave for 2m and 5/8 wave with gain for 440MHz. 7.25" collapsed, 19" extended..... **\$14.99**

**1710 Pocket Linear™ 3/8 Wave, 2M** Carry in your pocket like a ballpoint pen. When using your rubber duck, on the fringe and noisy, put on the Pocket Linear, extend to 24.5" and carry on your QSO. Pocket clip. 5.25" collapsed..... **\$9.99**



**1622 Apartment Antenna (top)** Operate 40-10M, 6M and 2M, up to 300W P.E.P. Tuning is accomplished by changing the tap on the highly efficient air-wound coil and adjusting the counterpoise for best SWR. Its universal mount/clamp lets you easily attach it to window frames, balconies and railings. It also works great indoors mounted to a desk, table or bookshelf. The 5.5' radiator collapses to 2.5' for easy storage and carrying. It includes 50' of coaxial cable, RF choke balun, 50' of coax, counterpoise wire and safety rope..... **\$89.99**

**1624 HF Mini Bugcatcher** Operate 40-6M, up to 300W P.E.P. Tune by changing the tap on the efficient air-wound coil and adjusting the counterpoise for best SWR. The 5.5' whip collapses to 2.5' for storage or avoiding a garage door. Use trunk lip, mirror, luggage or tri-mag mount ..... **\$79.99**

**1778 All-Band G5RV Antenna** Center fed, 102' flat top with a 300Ω twinlead feeder system and SO-239 connector to accept the 52Ω coax run from the shack. This unique design covers all bands 80 thru 10 meters with a nominal VSWR, so using an antenna tuner is recommended with most rigs. Also can be installed as an inverted vee or sloper. Works great on 160 meters operating as a Marconi with tuner and good ground. Handles 1500W..... **\$39.99**



## RUFFRIDER™ MOBILE ANTENNAS

(mounts not included)

This series features quality construction using precision machined components. Designed to battle the elements, rugged rides and highway abuse.

Dual band 144/440MHz mobiles have stacked stainless steel elements with high-Q phasing coils resulting in outstanding gain. Phased radiators flatten radiation patterns and concentrate transmit power at the horizon for maximum distance.

All models are factory tuned for SWR less than 1.5:1 and have 50Ω impedance. Each comes w/SO-239 base, but also includes a **FREE** NMO adapter.

**1402 Junior** 16.5" antenna fits in any garage on any vehicle. Unity gain on 2M, 3dB gain on 440 MHz. Handles 100W. No fold-over..... **\$34.99**

**1412 High Power** Only 40" long but handles a full 200W. Great for high power mobile & amp. 3dB on 2M, 5.5dB on 440MHz..... **\$49.99**

**1422 High Gain** 41.5" long giving you extra gain with little increase in height. Handles 150W. 3.2dB on 2M, 5.7dB on 440MHz..... **\$49.99**

**1432 Highest Gain** Tall 62.5" brute gives you a whopping 5dB gain on 2M, 7.6dB gain on 440MHz. Handles 150W..... **\$69.99**



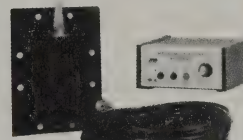
**MFJ Manually Tuned Screwdriver Antenna** Small and lightweight, supplied with a 4.5' telescopic whip for mobile and a 10' telescopic whip for greater efficiency stationary use. Quickly and easily tuned by sliding the aluminum cover over the coil. Copper beryllium finger stock completely surrounds the coil for solid connection as tuning is accomplished. Unused turns on the antenna are shorted out and completely shielded. Once tuned, a nylon tipped thumbscrew locks the cover in place to prevent movement. The 4.5' whip collapses to 23", the 10' whip to 19". Coil and whips can easily be packed into a backpack for hiking or camping. A standard 3/8" x 24 male mount in the base makes it easy to connect to existing mount.

**1661** 20-6M, 12", 1 lb..... **\$119.99**

**1664** 40-6M, 15", 1.25 lbs ..... **\$159.99**



**1020C Indoor Active Antenna** 300 kHz-30MHz; 5 bands. Telescoping (21") antenna provides good signal strength. Functions as a preselector when using an external antenna - minimizes intermod, improves selectivity, reduces noise. Uses 9V battery, 9-18V DC or 110V. 5" w x 2" h x 6" d..... **\$79.99**



**1024 Outdoor Active Antenna** For 50kHz to 30 MHz reception. Separate RF amp module with 54" whip mounts outside, inter-

connect made by supplied 50' coax to control unit, containing gain control and 20dB attenuator. Select between 2 receivers & auxiliary antenna. Auxiliary in/output jacks. 12VDC or 110VAC. Control: 6" w x 2" h x 5" d, Module: 3" h x 4" w x 4" d..... **\$129.99**



**1910 Telescoping Fiberglass Mast (right)** Great for portable and temporary use - traveling, camping, hotels, hamfests, field day, DX-peditions. Use to construct loops and quads. Pull out each section and twist to lock, strong fiberglass, flexes to resist breaking. Extends to 33' and collapses to 3.8' Bottom section 1.75" diameter. 3.3 lbs ..... **\$79.99**

**1899T Walkabout™ Multi-band Telescopic Antenna** Designed specifically for the Yaesu FT-817 multi-mode HF/VHF/UHF portable transceiver or other QRP portables. Covers all bands (including WARC bands) from 80 to 6 meters. Power rating is 25 Watts. When fully extended it is just over 5' long and is fitted with a BNC connector. Band changing is achieved by plugging a lead into the appropriate socket on the base coil, and fine tuning using the 10-section telescopic whip. The whip unscrews from the base matching coil, so, collapsed, the antenna measures only about 8 inches ..... **\$129.99**

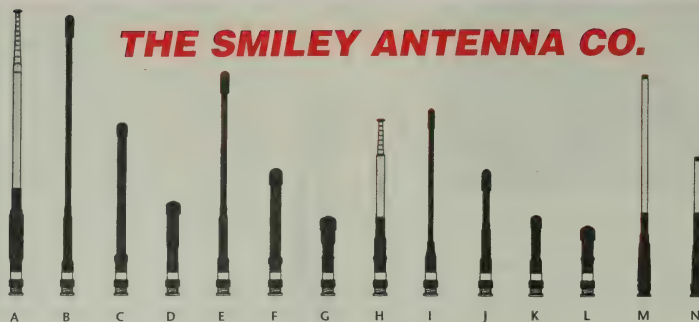
**Miracle Whip** All-Band, Rig-Mounted, Tunable Whip For the FT-817, and other QRP (5W) or SWL rigs. The Miracle Whip is the only completely self-contained, all-band 57' telescoping whip antenna with integrated tuner for receiving and transmitting that mounts right on a radio's antenna connector. Continuous tune 0.6 to 500 MHz rx and continuous tune 3.5 to 460MHz tx. The continuously variable auto transformer design operates effectively without any added counterpoises as the continuously variable nature permits finding a good match when there is no "standard" counterpoise attached. In effect, it uses whatever ground paths are available as a counterpoise..... **\$119.99**





# THE SMILEY ANTENNA CO.

PREMIER  
communications



## HAND TUNED ANTENNAS FOR HANDHELD RADIOS

Each Smiley antenna is individually tuned to resonance at band center under normal operating conditions (no ground plane, no radials). They're manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation with a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

**TS Thin Stick** 1/4-wave telescoping dual band antenna for 144 and 220MHz bands ..... **\$16.99**

**SS-II Super Stick II (A)** 2M, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended. Usable fully collapsed, or one section 1/4 wave. 54" extended, 10" collapsed..... **\$19.99**

**SS-II/COMBO Super Stick II Combo** Same as above, but includes a 2m stubby duck..... **\$26.99**

**5/8 SLD-2** 5/8 Slim Duck (B) 2m, 5/8-wave, 7db gain, flexible base loaded ant. 12" long .... **\$17.99**

**5/8 SLD-2 COMBO** 5/8 Slim Duck Combo As above, but includes a 2m stubby duck..... **\$24.99**

**RD-2 Regular Duck (C)** For 2m. Tuned ducks show a 3db gain over other rubber ducks because they are impedance matched for HTs..... **\$14.99**

**RDS-2 Stubby Duck (D)** Tuned, for 2m..... **\$14.99**

**SS-III Super Stick III** 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, or a one-section 1/4-wave. 36" extended, 8 3/4" collapsed..... **\$19.99**

**SS-III/COMBO Super Stick III/Combo** As above, but incl. a 220MHz stubby duck ..... **\$26.99**

**5/8 SLD-220** 5/8 Slim Duck (E) 220MHz, 7db gain, flexible base loaded 9" antenna..... **\$17.99**

**5/8 SLD-220 COM** 5/8 Slim Duck Combo Same as above, but includes a 220MHz stubby duck antenna ..... **\$24.99**

**RD-220 Reg. Duck (F)** 220MHz, tuned... **\$14.99**

**RDS-220 Stubby Duck (G)** As above..... **\$14.99**

**SS-IV Super Stick IV (H)** 440MHz 5/8-wave, flexible telescoping ant. 6-9db gain extended; usable collapsed. 18" extended, 5 3/4" collapsed..... **\$19.99**

**SS-IV/COMBO Super Stick IV Combo** Same as above, plus has 440MHz stubby duck ..... **\$26.99**

**SL-440 Slimline (I)** 440MHz, 1/4-wv. flex. **\$12.99**

**5/8 SLD-440** 5/8 Slim Duck (J) 440MHz, 7db gain, flexible base loaded 5" antenna..... **\$17.99**

**5/8 SLD-440 COM** 5/8 Slim Duck Combo As above, plus has a 440MHz stubby..... **\$24.99**

**RDS-440 Stubby (K)** 440MHz, tuned..... **\$14.99**

**RDMD-440 Mini Duck (L)** As above ..... **\$14.99**

**FLX 1/2 WAV-2M Flex-Coil (M)** 2M, 1/2-wave, 7-9db gain, flexible base, 35" fully extended **\$25.99**

**270A (N)** Telescoping 2m/440 gain antenna. 1/4-wave (2m) 5/8-wave (440MHz). The 270A is also available with SMA ..... **\$19.99**

**TAQ** 1/4-wave whip antenna, specify for 2M, 220 or 440MHz .....each **\$10.99**



RD-78 RD-8 RD-98 RD-9 AL-800

## HANDHELD ANTENNAS

**RD-2 Short Duck Antenna** (not pictured) Perfect fit for the new micro-sized handhelds such as the VX-1R, VX-5R, IC-Q7A, etc. Only 2" tall, but gives big performance. Operates on both 2M and 440MHz and also works great for out of band scanning. BNC connector..... **\$14.99**

**RD-2SMA** Same as RD-2, SMA connector **\$15.99**

**RD-78 Extended Duck Antenna** 15" tall, provides an improvement over stock, steel, spring-type antennas. Hit local repeaters solidly, access distant machines, talk extended simplex. Has 2.5dbi gain on VHF, 3.2dbi on UHF. Also includes 800/900MHz receive capability. Flexible, but doesn't droop. Gold-plated BNC connector ..... **\$19.99**

**RD-8 Duck Antenna** 6.5" tall and very flexible. Improves your signal over any manufacturer's stock duck. The perfect companion to any 2M/440MHz handheld, including those with 800/900MHz receive. Gold-plated BNC connector..... **\$14.99**

**RD-98 Thin Whip Antenna** A 2M/440MHz HT antenna that is 17" long with a diameter of only 1/16th of an inch. Made of extremely strong and very flexible material - ties in a knot without damage! BNC connector..... **\$24.99**

**RD-98SMA** Same as RD-98, SMA conn... **\$27.99**

**RD-9 Flexible Duck Antenna** An extremely flexible 7" tall rubber duck that will improve handheld performance on both 2M and 440MHz, while providing 800/900MHz receive capability. Connector is protected by a moisture shield and is molded to sit firmly on the connector, preventing excessive wear and tear. BNC connector ..... **\$18.99**

**RD-9SMA** Same as RD-9, SMA conn..... **\$20.99**

**AL-800 Telescoping Antenna** Useful whenever you need extra performance for satellite work, or when on the fringes of a repeater. Telescopes to 34" or collapses to 10". Has 3.2dbi gain on VHF, 5.5dbi on UHF. For convenience and/or shorter range operation, the telescoping section unscrews and may be replaced with the included 9" rat tail. Gold-plated BNC connector..... **\$29.99**



## Arrow Antenna

**146/437-10** KK5YY, pictured at the left, working VE6EGN on the AO27 satellite using a Yaesu VX-1R, with 500mW output, connected to an Arrow 146/437-10. The Arrow is designed specifically to allow portable satellite operation using just an HT. Meaning, it's engineered to provide maximum gain and efficiency within a small size and weight. The boom construction is 3/4" square aluminum stock, 37.5" long with a foam grip on the back end for comfort. The three VHF and seven UHF Gamma matched elements with separate BNC connectors are aluminum arrow shafts which are strong and lightweight, and plastic tipped for safety..... **\$73**

**146/437-10BP** Split boom model..... **\$79**



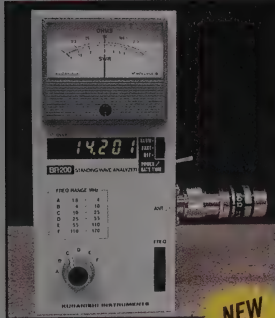
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Used & Demo  
Equipment lists

Updated regularly on the web.  
Check them out and order **On-line**



**NEW** from Kuranishi Instruments LTD, Japan  
**BR-200** Professional-Grade SWR/Antenna Analyzer



Perform SWR and impedance measurements with confidence! The BR-200 is a laboratory grade precision test instrument providing a wide-band RF signal source for analyzing antenna systems and other equipment without the need for a separate transmitter. • 1.8-170MHz • High precision meter • 500mW 50Ω dummy load included • Impedance: 12.5 - 300Ω • Connector: SO-239

**NEW**

# COMET & Maldol Dualband and Multiband Base Antennas



**Wi-Fi/802.11b/LAN  
 Access Point Antennas**

**COMET GP-15** • Tri-band 52/146/446MHz Base Repeater Antenna  
 Gain & Wave: 52MHz 3.0dBi 5/8 wave x 2 • 446MHz 8.6dBi 5/8 wave x 2 • 146MHz 6.2dBi 5/8 wave x 2 • 220MHz 7.8dBi 5/8 wave x 3 • Max Pwr: 150W • Length: 7'11" • Weight: 3lbs. 1oz. • Conn: Gold-plated SO-239 • 2MHz band-width after tuning (6M) • Construction: Single-piece fiberglass

**COMET CX-333** • Tri-band 146/220/446MHz Base Repeater Antenna  
 Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 • 220MHz 7.8dBi 5/8 wave x 3 • 446MHz 9.0dBi 5/8 wave x 5 • Max Pwr: 120W • Length: 10'2" • Weight: 3lbs. 1oz. • Conn: Gold-plated SO-239 • Construction: Fiberglass, 2 Sections

**COMET GP-3** • Dual-band 146/446MHz Base Repeater Antenna  
 Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Max Pwr: 200W • Length: 5'11" • Weight: 2lbs. 9ozs. • Conn: Gold-plated SO-239 • Construction: Single-piece fiberglass

**COMET GP-6** • Dual-band 146/446MHz Base Repeater Antenna  
 Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 • 446MHz 9.0dBi 5/8 wave x 5 • Max Pwr: 200W • Length: 10'2" • Weight: 3lbs. 8ozs. • Conn: Gold-plated SO-239 • Construction: Fiberglass, 2 Sections

**NEW**

**Maldol NEW HVL-8** Ultra-compact 8 band HF/VHF/UHF vertical antenna  
 80/40/20/15/10/6/2M/70cm Only 1/2 the traditional size and weight of vertical HF antennas, and it includes 2M/70cm! Unique radial system rotates to balcony installations, the radials can all be rotated to one side. • HF and 6M: 1/4 wave-length • Gain: 1.7 • V: 1/2 wave-length, 2.15dBi • Gain 70cm: Two 5/8 waves in phase, 5.5dBi • Impedance: 50 Ohm • Max Power: HF 200W SSB • 6M-70cm: 150W FM • Conn: SO-239 • Height: Only 8'6" • Weight: 5lbs. 7ozs.

**COMET GP-9/GP-9N** • Dual-band 146/446MHz Base Repeater Antenna • BEST SELLER!  
 Gain & Wave: 146MHz 8.5dBi 5/8 wave x 3 • 446MHz 11.9dBi 5/8 wave x 8 • Max Pwr: 200W • Length: 17'8" • Weight: 5lbs. 11ozs. • Conn: GP-9 Gold-plated SO-239 • GP-9N Gold-plated N-type female • Construction: Fiberglass, 3 Sections

**COMET GP-24** The standard high gain 2.4GHz access point antenna for maximum range/signal strength • 2400-2500MHz • Gain: 15.4dBi • Length: 5'10" • Weight: 2lbs. 9ozs. • Conn: Gold-plated N-type female • Construction: Heavy-duty white fiberglass radome

**COMET GP-24-3** The same physical high gain 2.4GHz antenna as the GP-24, but with a 3-degree electrical downtilt to concentrate the signal to the horizon and below **Special Order**

**COMET GP-24-S** Medium gain access point antenna for applications where maximum distance is not as important as a solid signal around and directly below the antenna. • Gain: 9.9dBi • Length: 3'9" • Weight: 1lb. 14ozs. • Conn: Gold-plated N-type female • Construction: Heavy-duty white fiberglass radome



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# Go Mobile!

get there with

## COMET & Maldol HF/Multiband Mobile Antennas

NEW

**Maldol MH-511** • Tri-band 6M/2M/70cm HT Antenna  
• Length: 4" • Conn: Male SMA

**Maldol MH-510** • Tri-band 6M/2M/70cm HT Antenna  
• Gain: 0/0/3.2dBi • Length: 20.75" • Conn: Male SMA

**COMET HT-224** • Tri-band 2M/220/70cm HT Antenna  
• Gain: 1.3/1.4/1.8dBi • Length: 11.5" • Conn: Male SMA

**Maldol MH-610** • Tri-band 2M/220/70cm HT Antenna  
• Gain: 0/1.8/3.2dBi • Length: 14" • Conn: Male SMA

NEW

**Maldol NEW EX-510B/EX-510BMMO** • Tri-band 6M/2M/70cm with fold-over  
• Gain & Wave: 52MHz 1/4 wave 146MHz 2.15dBi 1/2 wave 446MHz 5.5dBi 5/8 wave x 2  
VSWR • Length: 37" • Conn: PL-259 or NMO style • Max Power: 50W FM

NEW

**Maldol NEW EX-510** • Tri-band 6M/2M/70cm with fold-over  
• Gain & Wave: 52MHz 0.8dBi 1/4 wave • 146MHz 4.5 dBi 5/8 wave • 446MHz 7.2dBi  
5/8 wave x 3 • Length: 58" • Conn: PL-259 • Max Pwr: 120W

**Maldol NEW EX-510** • Quad-band 10M/6M/2M/70cm with fold-over hinge  
• Gain & Wave: 10M & 6M 1/4 wave 2M 2.15dBi 1/2 wave 70cm 5.5dBi 5/8 wave x 2  
• Length: 55" • Max Power: 10W 120W SSB 6M/2M/70cm 100W FM • Conn: PL-259

**Maldol NEW EX-510** • HF/6M/2M/70cm Mobile Antenna \*80\*\*20\*\*17/40/15/10/6/2M/70cm Mobile antenna with fold-over hinge  
• Gain & Wave: 2M 2.15dBi 1/2 wave • 70cm 5.5dBi 5/8 wave x 2 • VSWR: HF 1.6:1 or less, 6M-70cm 1.3:1 or less • Length: 44" (min), 78" (max) • Max Pwr: HF 120W SSB, 6M 200W SSB/100W FM, 2M/70cm 100W FM • \*L-14 optional 20M coil • \*L-18 optional 17M coil • \*L-3.5 optional 75/80M coil • Features: • 6M/2M/70cm operation is constant. You CHOOSE the HF coils you want to add, up to four stock or optional. One vertical, the rest horizontal. • Easily mounts to standard trunk/cock mount in minutes • Economical • Fold-over hinge built in  
• Select the duplexer or triplexer for your specific radio(s). CF-706A, CF-530, CFX-514N.

NEW

**Maldol NEW EX-510** • \*40/20/15/10/6/2/70cm Mobile antenna with fold-over hinge  
• Gain & Wave: HF 1/4 wave 2M 2.15dBi 1/2 wave 70cm 5.3dBi 5/8 wave x 2 • VSWR: HF-6M 1.6:1 or less 2M/70cm 1.5:1 or less • Length: 66" • Max Power: HF 320W SSB 6/2/70cm 150W FM  
\*AH-C7 optional 40M coil

For a complete catalog, call or visit your local dealer. Or, contact NCG Company.  
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**COMET BNC-24** • Dual-band 2M/70cm HT Antenna  
Gain: 2.15/3.5dBi • Length: 17" • Conn: BNC  
Super flexible featherweight whip

**COMET SMA-24** • Dual-band 2M/70cm HT Antenna  
Gain: 2.15/3.5dBi • Length: 17" • Conn: SMA  
Super flexible featherweight whip

**Maldol MH-209** (BNC Conn) • 2M/70cm Dual-band HT Antenna  
**Maldol MH-209SMA** (SMA Conn)  
Gain & Wave: 0 1/4 wave • Length: 3" Soft flexible rubber

# Go Mobile!

get there with

## COMET & Maldol

### Dualband Antennas

#### NEW APEX Series

MALDOL'S Newest Mobiles!  
Bright Chrome and Brushed  
Aluminum Finish!

NEW

**COMET NEW CP-5M/5NMO** • Dual-band 2M/70cm  
Gain & Wave: 2M 1/4 wave • 70cm 5.0dBi 9/8 wave • Length: 21" • Conn: PL-259 • Max Power: 60W

NEW

**COMET NEW CP-5M/5NMO** • Dual-band 2M/70cm w/fold-over  
Gain & Wave: 2M 1/2 wave center load 3.2dBi • 70cm 5/8 wave x 2 5.7dBi • Length: 30" • Conn: PL-259 • Max Power: 60W

NEW

**COMET NEW CP-5M/5NMO** • Dual-band 2M/70cm w/fold-over  
Gain & Wave: 2M 1/2 wave center load 3.3dBi • 70cm 5/8 wave x 2 5.8dBi • Length: 38" • Conn: PL-259 • Max Power: 60W

**COMET NEW CP-5M/5NMO** • Dual-band 146/446MHz cellular look-a-like  
Gain & Wave: 146MHz 0dBi 1/4 wave, 446MHz 2.15dBi 1/2 wave • Length: 12" • Conn: B-10 PL-259/B-10NMO NMO • Max Pwr: 50W

**COMET NEW CP-5M/5NMO** • Dual-band 146/446MHz  
Gain & Wave: 146MHz 2.15dBi 1/4 wave, 446MHz 3.8dBi 5/8 wave center load • VSWR: 1.5:1 or less • Length: 18" • Conn: PL-259 or NMO Style • Max Pwr: 60W

**COMET NEW CP-5M/5NMO** • Dual-band 146/446MHz  
Gain & Wave: 146MHz 2.6dBi 1/2 wave, 446MHz 4.9dBi 5/8 wave x 2 • VSWR: 1.5:1 or less • Length: 29" • Conn: PL-259 or NMO Style • Max Pwr: 100W

**COMET NEW CP-5M/5NMO** • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 2.5dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: SBB-5 PL-259/SBB-5NMO NMO • Max Pwr: 120W

**COMET NEW CP-5M/5NMO** • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: SBB-7 PL-259/SBB-7NMO NMO • Max Pwr: 70W

NEW

**COMET NEW C757/C757NMO** Challenger Series • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 2.15dBi 1/2 wave, 446MHz 5.5dBi 5/8 wave x 2 • VSWR: 1.5:1 or less • Length: 38" • Conn: PL-259 or NMO Style • Max Pwr: 80W

**COMET NEW CP-5M/5NMO/3/8-24**  
Universal mount and coax cable combos.  
(SO-239, NMO, 3/8-24/PL-259) Heavy-duty,  
adjustable RS-730 trunk/van/ SUV/truck  
door mount and deluxe cable assembly. 16"  
6" length w/18" mini RG-188A/U type coax.  
Max antenna 70". 3 different models.

#### NEW Challenger Series

COMET'S Newest Mobiles!  
Sleek, Super-Flexible,  
Dark Chrome Finish

NEW

**COMET NEW C767/C767NMO** Challenger Series • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 3.5dBi 1/2 wave center load, 446MHz 6.0dBi 5/8 wave x 2 center load • VSWR: 1.5:1 or less • Length: 40" • Conn: PL-259 or NMO Style • Max Pwr: 80W



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# COMET & Maldol

## specialists in "No Holes Mobile Mounts!"

### CP Series Universal Lip Mounts

Four adjustment planes, four large setscrews holds them securely in place on virtually any lip 1/4" thick or less. Use on trunk lids, van doors, truck doors, hoods etc. 16' 6" of deluxe coax cable including 18" of mini RG-188A/U style for easy entry thru the weather seal without causing wind noise, water leaks and/or wind noise.

Max antenna size: 70"/16 ozs

Max Power: HF 130W VHF 75W UHF 45W



**NEW**

**COMET NEW CP-4MMO**  
Universal lip mount with coax,  
NMO and PL-259 connectors.



**NEW**

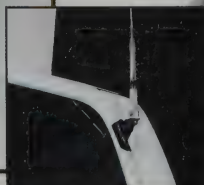
**COMET NEW CP-5 3/8-24**  
Universal lip mount with coax,  
3/8x24 threaded stud and PL-  
259 connectors.

**COMET CP-5M** Universal lip mount with coax, SO-239 and  
PL-259 connectors.



**NEW**

Mount: CP5M Antenna: C757



Combine the coax style and length you need with a bracket from below. (assemblies also available with N-connectors)



**COMET 3D5M/3D4M** Standard  
low loss cable assembly. Gold plated  
SO-239/PL-259 connectors. 17'  
length/13.5' length.



**COMET CK-3M5/CK-3M** Deluxe  
cable assembly 17' length including  
17' of RG-188A/U for easy entry from  
a lip mount without causing water  
leak, wind noise or coax damage. CK-  
3M 9'9" total length.

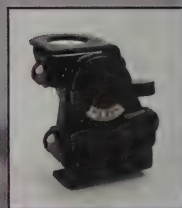
*Choose the bracket that best fits your antenna and vehicle. All have multiple adjustments and fit virtually any lip 1/4" thick or less. Soft rubber protects the vehicle paint.*



**COMET RG-720** Heavy-  
duty, 4 adjustment planes, up  
to 70" antenna.



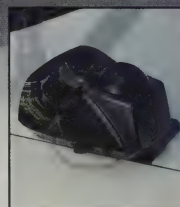
**COMET RS-720/  
RS-720NMO** Med-duty, 3  
adjustment planes, up to 60"  
antenna: NMO mount version.



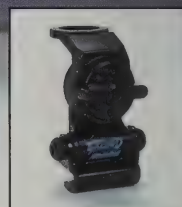
**COMET RS-420** Light-  
duty, 3 adjustment planes, up  
to 45" antenna.



**Maldol PRM-T** Heavy-  
duty, 3 adjustment planes, up  
to 80" antenna.



**Maldol MK-30H** 12VDC  
motorized mount. Mounts to  
vertical or horizontal door lip.  
Up to 70"/19 oz. antenna.



**Maldol EM-B80** Light-  
duty, 2 adjustment planes, up  
to 40" antenna.

**COMET GR-5M** Trunk lip mount, low-profile,  
stainless steel. Offset washers provide up to 17 deg  
vertical adjustment of antenna. 16'9" of deluxe cable  
included, 18" of mini RG-188A/U style coax for easy  
entry thru the weather seal. Gold-plated SO-239/PL-  
259 connectors.



The rear doors on newer trucks are the perfect place to mount antennas: • No holes to drill • Above roof line • Easy access

When mounting to a van, SUV, truck, etc., use the CP-5M or build your own system with components shown above. There are several mount sizes, coax diameters and coax lengths from which to choose.



For a complete catalog, call or visit your local dealer. Or, contact NCG Company.  
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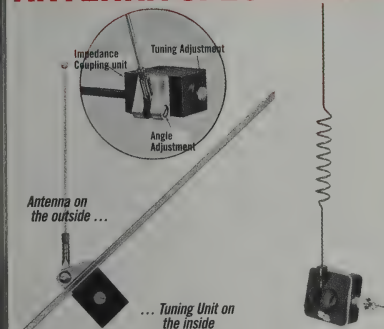
# Lakeview Co., Inc.

**WD4BUM HAMSTICKS® Two-Piece**  
Monoband Mobile Antennas Hamstick 75 thru 10 meter models consist of a 47 inch long x 1/2 inch diameter fiberglass base section with the loading coil wound over its length and covered with black PVC shrink tubing. It's fitted on one end with a 3/8" X 24 brass base fitting that fits most amateur mobile mounts. A black 48 inch tempered stainless steel whip telescopes into the top of the base section and provides for frequency adjustment. The 6 meter model has a 34 inch base section and whip. Convenient frequency vs length graphs are included with the instructions.

If the antenna shows a SWR of 1.5 to 1 or better, no matching should be necessary. However, if it is, which may be especially true on 40 and 75m, you can capacitively match the base using values recommended in the instructions. If you frequently change bands you can use the **WD4BUM INDUCTI-MATCH (IM-1)** which consists of an impedance matching coil that simply installs at the base of the antenna. Using the supplied clip lead, you just tap up the coil for the best match.

**Models**  
**9106** (6M) **9110** (10M) **9112** (12M)  
**9115** (15M) **9117** (17M) **9120** (20M)  
**9130** (30 M) **9140** (40M) **9175** (75M)  
All Hamsticks ..... each **\$24.99**  
**901 Dipole Mount** for 2 Hamsticks ..... **14.99**  
**IM-1 Inducti-Match** ..... **17.99**  
**TM-1 License Plate Mount** 3/8" x 24... **44.99**  
**TM-1 PLUS License Mount** SO-239... **44.99**

## ANTENNA SPECIALISTS



### "ON-GLASS"™ MOBILE ANTENNAS

No holes to cut! The small tuning unit attaches to glass inside the vehicle and couples capacitively through the glass to the radiating element mounted on the outside. Installs with easily-removable adhesive. Includes adhesive, 15' coaxial cable with PL-259 connector • 50W • 144-174MHz (APR-151.3), 138-150MHz (APR143) • 6MHz, tunable bandwidth • Less than 1.5:1 VSWR • 50Ω nominal impedance • Electrical 1/2-wave radiator • Shunt fed, DC ground coupling unit • 33" (APR-151.3) 23" (APR143) stainless steel, black DURACOAT™ finish whip • 15' RG-58/U cable with PL-259

**APR-151.3** (left) 2m, on-glass, 33" high... **\$69.99**  
**APR143** (right) 2m 23" cell look-alike..... **\$69.99**

## PAR

### OMNIANGLE ANTENNAS

10/6/2M, 220, 440 MHz (fixed/mobile). Complement to high-gain directional arrays, allowing all-direction local work and monitoring. Outperform halos, loops and turnstiles! Longer than halfwave dipoles. Coupled with a unique shape, yield a horizontally-polarized antenna (pattern within 0.8dB of a circle, exhibits wide bandwidth). Rated at 150W, their built-in matchbox and current balun allow feeding with 52Ω coax. Virtually eliminates detuning due to moisture. Stackable for 3-6dB omni-directional gain and lower radiation angle.

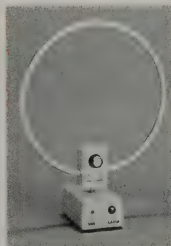
**OA-28** 10m, 28-30MHz ..... **\$74.99**  
**OA-50** 6m, 49.5-54MHz ..... **69.99**  
**OA-144** 2m, 138-150MHz ..... **54.99**  
**OA-222** 222-224MHz ..... **54.99**  
**OA-432** 420-450MHz ..... **54.99**  
Stacking Harnesses for Two Belden 8213 and silver/gold/teflon connects, 70cm uses N-connectors.  
**SK-50** for OA-50 ..... **\$36.99**  
**SK-144** for OA-144 ..... **34.99**  
**SK-432** for OA-432, type-N ..... **54.99**



**SM-50 Stressed Moxon 6M Antenna** Occupies approximately 1/2 the footprint of traditional two-element yagis, yet has nearly identical electrical specifications. The radiator material selection results in a further reduction in size and weight over classical Moxons. Once the coupling unit is installed onto the main radiator using two #10-32 screws, assembling the rest of the antenna, including mast mounting and tuning, requires no tools. Ideal for mountain topping, roving and stealth operation. • Horizontal polarity • Forward Gain: 5.8 dBi • F/B Ratio: 17 dB • Design Z: 50Ω unbalanced • V.S.W.R. BW: 1.5MHz between 1.5:1 points • 1kW power handling • 6061-T6 aluminum, fiberglass, genuine Flex Weave wire, stainless steel • Rectangular 84 x 31", 3lbs. .... **\$79.99**



**LA-350 Active Short-wave Loop** Two 12" diameter interchangeable antenna elements cover 3.0 to 9.0 and 9.0 to 30MHz. Rotates to enhance reception and null unwanted interference. Built-in 13.5 dB gain amplifier and tuning control to peak performance. Supplied with two elements, AC adapter, instruction manual and 20 inch cable with BNC connector ..... Milwaukee only **\$299.99**



**Phantom\* Whipless** design! They don't look like antennas. Attract less attention, less vandalism and have lower wind resistance. Less susceptible to damage by trees, garages, etc. Requires NMO mount.

**TRAB-1420 VHF** Covers 142-164MHz (tunable), Black radome is 3.30 in. high. Unity gain. **\$59.99**

**TRAB-4303 UHF** Covers 430-450MHz. Black radome is 3.30" high. 3dB gain ..... **\$29.99**



**BB-1443 VHF Wideband Antenna** Base loaded 5/8 wave. Covers 144-174 MHz, 3 dB gain, 49 in. tapered whip. Requires NMO mount. (Black) **\$39.99**

**CWB-4405C UHF Wideband, Self Tuning** Closed coil collinear. 440-470 MHz, 5dB gain, 32-1/8" tapered whip. Requires NMO mount. (Black) **\$49.99**

**CWB-1443 VHF 5/8-Wave Broadband, Self Tuning** 144-156MHz, 3.0 dB, 47" tapered whip. (Black) .. **\$49.99**

**BB-1442N Broadband, 5/8-Wave No Ground Plane** Base loaded, 144-174 MHz, 2.4dB, 49" tapered whip. **\$39.99**

**BB-4303 UHF 5/8-Wave** Covers 430-450MHz, 3dB gain, 11.81" straight whip. Requires NMO mount. (Black) ..... **\$34.99**

**AB-FT Broadband 1/4-Wave Tunable** 118-896 MHz, unity gain, NMO ..... **\$16.99**

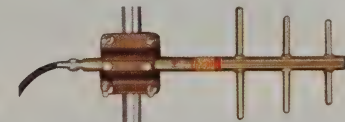
**AB-SCANC Scanner Antenna** Closed coil collinear for 150/450/800MHz receive only. Requires NMO mount. (Black) ..... **\$29.99**

**CB-144/440C Dualband VHF/UHF** Closed coil collinear covers 144-148, 440-450MHz, 2/5dB, 200W. Requires NMO mount. (Black) ..... **\$49.99**



### GPS ANTENNA

**GPS-15GBNC GPS Antenna** Low profile magnetic base GPS antenna with 14 ft. RG-174/U coax and BNC connector ..... **\$99.99**



### GOLD-ANODIZED, WELDED DIRECTIONAL YAGIS

Computer optimized and internally matched - wide bandwidth no tuning. End-of-boom N connector feed with an internal transmission line feeding the driven element.

**Y-1363 3-Element VHF** Covers 136-150MHz, 7.1 dBd, 17 dBd front-to-back ratio. Rated for 500W. Mounts on mast up to 2" diameter ..... **\$119.99**

**Y-4303 3-Element UHF** Covers 430-450MHz, 7.1 dBd gain, 17 dB front-to back ratio. Rated for 300W. Mounts on mast up to 1-5/8" diameter ..... **\$99.99**



# R6000 MULTIBAND VERTICAL

6 - 20 Meters

## The Shape of Things to Come

The R6000 is a 6 through 20 meter, no ground radial antenna. It includes many of the features of the R8, R7 and R5 antennas. R6000 means excellent performance, easy installation and use, slim silhouette and high reliability. There are no traps used on 6, 10 and 15 meters for maximum efficiency and power handling.

### ► EASY INSTALLATION

For typical use, tuning is not required

### ► AUTOMATIC BAND CHANGING

To any band 6 through 20 meters

### ► SLIM SILHOUETTE

Gain favor of family and neighbors with the slim, low profile of the R6000

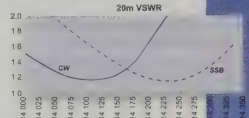
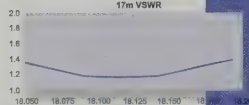
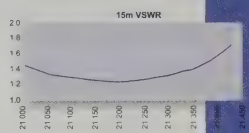
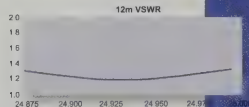
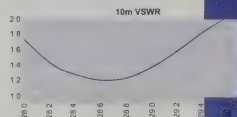
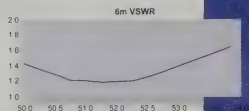
### ► 6 METER OPERATION

Join the fun of the "Magic Band" and take advantage of the new HF/50MHz transceivers

### ► AFFORDABLE PRICE

Cushcraft delivers the best quality and performance at a price no one else can match.

SPECIFICATIONS	R6000
Frequency, meters	6, 10, 12, 15, 17, 20
Gain, dBi	3
VSWR minimum	1.2:1 typical
2:1 bandwidth, KHz	6m >1300 10m >1700 12m >100 15m >450 17m >100 20m 300
Power, Watts output	1500
Radiation angle, deg.	16
Horizontal rad, deg	360
Height, ft (m)	19 (5.8)
Mast size range, in (cm)	1.5 - 1.75 (3.8-4.4)
Wind load, ft <sup>2</sup> (m <sup>2</sup> )	1.5 (.14)
Weight, lb (kg)	12.5 (5.6)



The R6000 employs quarter wavelength stubs on 10 and 15 meters to replace standard trap coils. The result is lower loss and wider bandwidth. The R6000 covers all bands 6 through 15 meters at a VSWR under 2:1. On 20 meters you can select the top 300 KHz or bottom 300 KHz of the band.

The R6000 weighs only 12-1/2 pounds (5.6 kg). It is lightweight and easy to mount for portable or permanent installations. Machined aluminum clamps and UV stable insulators guarantee years of reliable service. The R6000 comes with the standard Cushcraft warranty of one year from purchase - plus the industry's leading technical support team stands behind each Cushcraft antenna.

The R6000 makes an excellent diversity antenna to complement even the most complete stations, or pack up the R6000 for a trip to the DX location of your dreams.





## HF Multiband Vertical Antenna 6, 10, 12, 15, 17, 20, 30, 40 Meter

Here is Cushcraft's newest multiband HF vertical antenna. This multiband vertical design provides 8 band coverage encompassing the 6, 10, 12, 15, 17, 20, 30 and 40 meter bands.

Cushcraft has achieved a major breakthrough in the development of an HF multiband vertical antenna that has been specifically designed for use with a tuner and amplifier. As a result, the antenna more accurately addresses the needs of the contemporary ham shack.

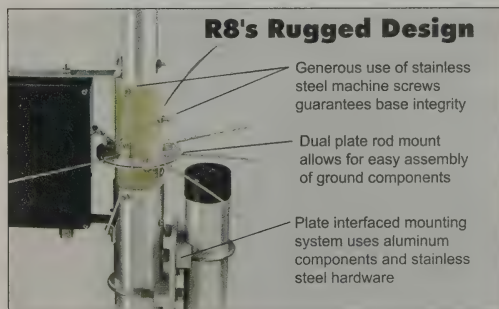
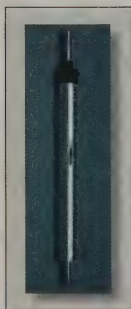
Multiband vertical antennas have always been complicated designs with components as likely to be damaged by high levels of mismatched transmit power as the rigs they are attached to. Before the use of tuners became widespread, the antenna was protected by the same safety mechanisms that protected the rig. Now, the automatic power reduction circuits of the past have actually become a second layer of protective circuitry. Although the auto-tuner provides the ham with a more versatile device as well as protecting the rig's components, the antenna is more vulnerable than ever. With the press of a button, very high loads can be imposed on the antenna. The result to the antenna can be catastrophic failure in some instances.

The R8 is the first multiband vertical designed for the rigors of contemporary operating conditions. Although the antenna is best operated within its 2.0:1 VSWR bandwidth, it can sustain a 3.0:1 VSWR mismatch at full power for typical operating intervals. Now radio amateurs can take full advantage of the versatility that a tuner used in conjunction with a multiband HF vertical antenna can give them. *For high wind environments, add the R8GK Guy kit—three point non-conductive guy system.*

- ▶ **RUGGED CONSTRUCTION**
- ▶ **INSTANT BAND CHANGING**
- ▶ **SLIM, LOW PROFILE SILHOUETTE**

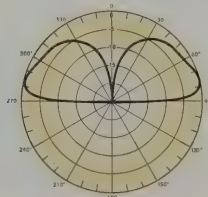
### SPECIFICATIONS

	R8
Frequency, meters:	6,10,12,15,17,20,30,40
Gain, dBi:	3
VSWR 2:1 bandwidth, KHz:	40m (150) 30m (>50) 20m (>350) 17m (>100) 15m (>450) 12m (>100) 10m (>1500) 6m (>1500)
VSWR at resonance (typical):	1.3:1
Power Rating, Watts PEP:	1500
Vertical Radiation angle, deg.:	16
Horizontal rad, deg.:	360
Height, ft(m):	28.5 max. (8.7)
Wind survival:	80 mph
Weight, lb. (kg):	23 (10.5)
Shipping Dimensions:	3-3/4" x 5-1/4" x 84-1/2"

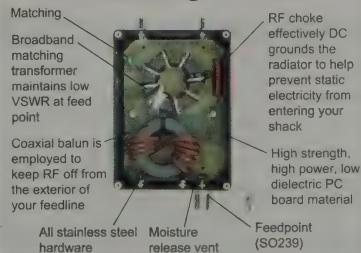


Even if you aren't using a tuner and amplifier, you will appreciate this antenna's rugged, heavy duty components. The R8 is easy to assemble and is built to provide years of trouble free service and satisfaction.

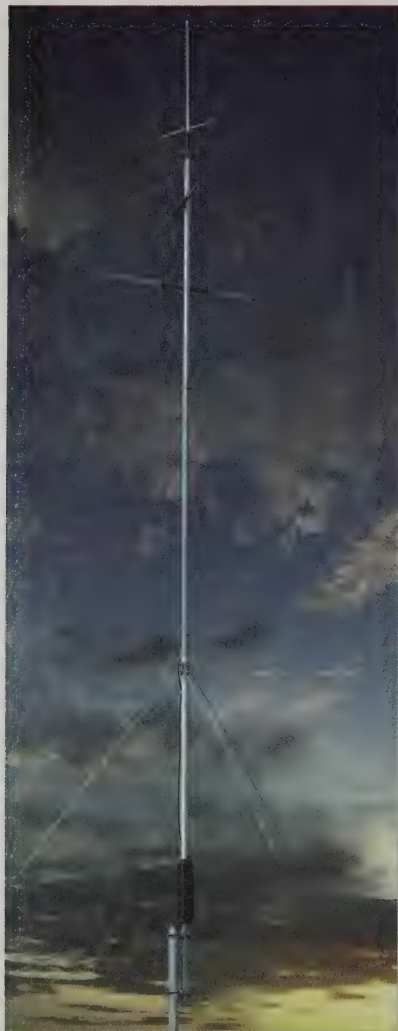
### Typical elevation radiation pattern



### R8 Matching Network







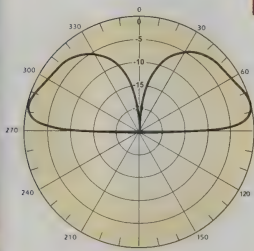
### MA5V Five-Band Restricted-Space Vertical Antenna

- ▶ Light-weight rugged construction
- ▶ Rapid breakdown for storage or transport
- ▶ No exotic matching networks or tuners
- ▶ Advanced "no radial" OCFD design

Cushcraft's new MA5V delivers superb HF multi-band performance while maintaining a neighbor-friendly low profile. Perfect for roof-mounts, patios, small backyards, condos, and motor homes, this 6.5-pound bantam-weight installs quickly without the "heavy lifting" required of larger antennas. Whether you install it permanently or take it down between operating sessions, you'll appreciate special features like the MA5V's gust-absorbing fiberglass base, resin-sealed resonator coils, aluminum mast blocks, and all-stainless hardware. Best of all, the MA5V is solidly engineered—its "no-radial" OCFD design delivers low SWR and high performance without using exotic matching networks or tuners. Simply connect a radio and you're ready to work the world! The MA5V is the perfect restricted-space DX solution for 20, 17, 15, 12, and 10 meters!

### MA6V Six-Band Restricted-Space Vertical Antenna

Made for today's expanded-coverage radios, Cushcraft's MA6V provides the same great versatility and performance of the MA5V—with the addition of 6 Meters. Enjoy congestion-free FM-repeater operation and explore the world of exotic seasonal band openings on 50 MHz CW and SSB. It's a great way to add amateur radio's "magic band" to your operating repertoire!



Typical elevation radiation pattern



SPECIFICATIONS	MA5V	MA6V
Frequency, meters:	20, 17, 15, 12, 10,	20, 17, 15, 12, 10, 6
Gain, dBi:	1-2	1-2
VSWR at resonance:	1.2:1 All bands	1.2:1 All bands
Maximum Wind Surface:	.82 ft <sup>2</sup> (.076 m <sup>2</sup> )	.82 ft <sup>2</sup> (.076 m <sup>2</sup> )
Wind Survival, mph:	>80	>80
Maximum Power PEP:	250 W	250 W
Height, ft (m):	14.7 (4.48)	14.7 (4.48)
Mast size, in (cm):	1.25 -2.0"	(3.18-5.1)
Weight, lb (kg):	6.5 (2.95)	6.9 (3.13)
Shipping Dimensions:	3" x 3" x 80-1/2"	3" x 3" x 80-1/2"





High Front To Back Ratio  
On 10/15/20m

The Director,  
Small Footprint-Big Signal

**MA5B.** Cushcraft's newest multiband HF antenna provides 5 band directivity in a package small enough to mount to a tripod. The MA5B is a design that does not sacrifice ruggedness, performance and power handling for size and ease of installation.

- I am delighted with the performance compared with other HF antennas I have been using!  
Bob Swannell, MOBYA
- Thank you for making a fine quality, powerful mini beam that can fit anyones budget.  
Phil West, KF2WL

SPECIFICATIONS		MA5B				
Frequency, MHz	10	12	15	17	20	Meters
Elements	2	1	2	1	2	per band
Gain	53	10	48	10	36	dBi
Front to Back Ratio	10	0	12	0	22	dB
Sidelobe Attenuation	25	25	25	25	25	dB
VSWR 2:1 Bandwidth	665	>110	255	>100	90	kHz
Longest Element	17.1ft (5.2m)					
Turning Radius	88ft (2.7m)					
Boom Length	73ft (22m)					
Boom Diameter	1.5in (3.8cm)					
Max. Wind Surface Area	3.22 ft <sup>2</sup> (3m <sup>2</sup> )					
Max. Power Handling	1.2 kw					
Weight	26.5 lbs. (12kg)					

- Easy To Tune  
No complicated gamma matches to adjust.
- Low VSWR  
Flat response across all 5 bands. VSWR minimum 1.2:1.
- Single Feed Point  
Only one coaxial feed line is necessary for all 5 bands.
- Rugged Construction  
Cushcraft's tried and true stainless steel mounting hardware and heavy wall aluminum tubing make for a rugged, long lasting antenna.
- Easy To Turn  
With a boom length of 7 feet and a longest element length of 17 feet, a lightweight TV rotor will do the trick.

BIG THUNDER TRIBANDER

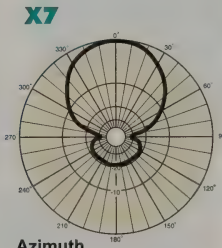


- ▶ New High Efficiency Computer Optimized Design for Maximum Gain and Ultra Clean Radiating Pattern
- ▶ 100+ MPH Construction for Best Reliability and Long Life
- ▶ NEW 4L Log Cell Driven Elements for better VSWR Bandwidth
- ▶ Trapless Driven Elements and Reflectors for Reliable Power Handling
- ▶ Interleaved Element Design for Mono-Band Performance
- ▶ Add-on kits available for 40 Meters

X7


The X7 Tribander Yagi is geared to set new standards in both radiating performance and mechanical reliability. Cushcraft's product development team has employed the latest computer modeling technology to achieve a superior electrical design as well as elegant new mechanical hardware and assembly techniques.

Each mechanical component was designed to 100+ MPH wind survival with a 1.25 safety factor. Traps were eliminated from the high current driven elements and reflectors using the new 4L Log Cell design, which yields virtual monoband performance and maximum power handling capability. Traps are employed only in the lower current directors for increased gain and sharper pattern. The result is a truly high performance antenna which will easily handle the legal limit.



Azimuth  
Typical radiation patterns.  
Height: One wavelength.  
Frequency: 20 M  
Elevation

SPECIFICATIONS		X7
Frequency Coverage (Meters)		10, 15, 20
Total number of Elements		7
Maximum Gain (dBi) @ One Wavelength	20M 15M 10M	12.5 @ 14 deg 13.0 @ 12 deg 12.9 @ 14 deg
Maximum Front to Back Ratio (dB)		30
Number of Elements per Band		3
VSWR Minimum		1.1:1
VSWR 1.5:1 Bandwidth (KHz)	20M 15M 10M	600 750 1700
Longest Element, ft (m)		37.2 (11.33)
Turning Radius, ft (m)		20.0 (6.09)
Boom Length, ft (m)		18 (5.49)
Boom Diameter, in (cm)		2-1/2 (6.35)
Maximum Mast Diameter OD, in (cm)		2-1/2 (6.35)
Maximum Wind Survival, mph (kph)		>100 (>161)
Maximum Wind Surface Area, ft <sup>2</sup> (m <sup>2</sup> )		7.9 (.73)
Windload @ 80 mph, lb (kg)		202 (92)
Maximum Power Handling (KW)		2
Weight, lb. (kg)		60 (27.2)



**40 Meter Add On Kits**

MODEL	X740
Band	7 Mhz
Element Length ft. (m)	41 (12.5)
Power (W)	2KW
Weight	20lbs. (9.1 kg)



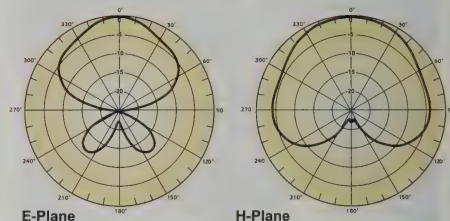
# ASL670 LOG PERIODIC ANTENNA

**6 Meter - 70 CM**



The antenna exhibits excellent gain and f/b with good VSWR bandwidth to boot. Get one today and enjoy the fun of high performance operation and multi-frequency listening all in one compact antenna.

- ▶ Rugged construction
- ▶ Wide band Log Periodic
- ▶ Easy to install
- ▶ Easy to turn



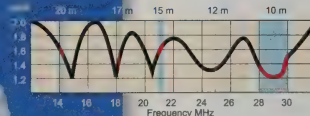
## ASL670 Log Periodic

Cushcraft's new ASL670 is the ultimate multi-use antenna. Since the antenna is a log periodic, it offers continuous coverage through the 2 and 6 meter bands as well as 220 and 440 MHz. So, while being a terrific antenna for operating on those bands, it is also a great aviation and public safety band monitoring antenna. Use the antenna for contesting and mountain topping if you like. The antenna is compact and easy to assemble and disassemble with no tuning required. Yet it is rugged enough for permanent installation. The ASL670 really shines in its performance specs.

MODEL	ASL670
Frequency, MHz:	50 - 450, Continuous
No. Elements:	14
Forward Gain, dBi, dBd:	6.5, 4.5
Front to Back Ratio, dB:	20
SWR:	1.5:1 Average
Power Rating, Watts PEP:	300
3dB Beamwidth, Degrees, H-Plane:	110
E Plane:	80
Boom Length, ft (m):	6'-8" (1.9)
Boom Size, in (cm):	1.0 x 2.75 (2.54 x7)
Longest Element, ft (m):	126.6" (3.22)
Turning Radius, Horizontal Mtg. ft (m):	6'-3" (1.9)
Turning Radius, Vertical Mtg. ft (m):	3'-9" (1.15)
Mast Size Range, in (cm):	1.5"-2.5" (3.8-6.4)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> ):	3.0 (.28)
Weight, lb (kg):	11-1/4 (5.15)



- ▶ Continuous five band coverage from 13.5 to 32 MHz
- ▶ Constant over entire frequency range
- ▶ 6.4 dBi gain, 65 degree beamwidth
- ▶ High efficiency design, antenna stays cool and VSWR steady
- ▶ 18 foot boom and 19.5 foot turning radius



## Skylog

The ASL2010 log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

MODEL	ASL2010
Frequency, MHz	13.5-32
No. Elements	8
Forward Gain, dBi	6.4
Front to Back Ratio, dB	15-20
SWR 1:2:1 Typical	
2:1 Bandwidth	18.5 MHz
Power Rating, Watts PEP	2000
3dB Beamwidth, Degrees	
E Plane	65
Boom Length, ft (m)	18 (5.48)
Boom Diameter, in (cm)	2.0 (5.08)
Longest Element, ft (m)	38 (11.58)
Element Ctr Dia., in (cm)	1.25 (3.18)
Turning Radius, ft (m)	19.25 (5.86)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	10.1 (.93)
Weight, lb (kg)	55 (25.5)





# 10 - 40 M

# WORLD RANGER MULTIBAND HF YAGIS

## A4S Four Element Beam - 10, 15 & 20 Meters

### With stainless steel hardware.

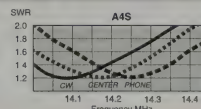
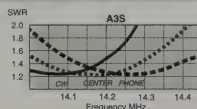
The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your HF work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. Our solid construction keeps the A4S on the tower! Add 40 meters with A744 kit.

## A3S Three Element Beam - 10, 15 & 20 Meters

### With stainless steel hardware.

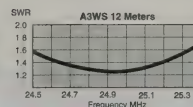
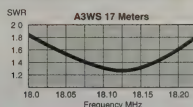
The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear.

Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you! Add 40 meters with A743 kit.



## A3WS WARC Bands 3 Element - 12 & 17 Meters

Enjoy the excitement of the WARC bands with this popular beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.



MODEL	A4S	A3S	A3WS
Frequency, MHz	28, 21, 14	28, 21, 14	24, 18
No. Elements	4	3	3
Forward Gain, dBi	8.9	8.0	8.0
Front to Back Ratio, dB	25	25	25
SWR 1.2:1 Typical			
2:1 Bandwidth KHz	>500	>500	300
Power Rating, Watts PEP	2000	2000	2000
3 dB Beam Width, Deg. E Plane	58	60	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)	14 (4.27)
Boom Diameter, in (cm)	2 (5.10)	1.5 (3.81)	1.5 (3.81)
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)	25.1 (7.66)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)	14.4 (4.4)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	5.50 (0.51)	4.36 (0.47)	4.1 (0.38)
Weight, lb (kg)	37 (16.8)	27 (12.9)	22.5 (10.2)

## 30 & 40 Meter Add-On Kits - For A3S, A4S & A3WS

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

**A743** 7 MHz/10 MHz kit for A3S

**A744** 7 MHz/10 MHz kit for A4S

**A103** 10 MHz kit for A3WS

MODEL	A743/A744	A103
BAND	7 MHz (40 m) 10 MHz (30m)	10 MHz (30m)
Driven Element with Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 min. 28.4 max. (8.27-8.66)
Windloading ft <sup>2</sup> (m <sup>2</sup> )	.58 (.05)	.27 (.03)
Bandwidth, KHz	125	150
Power Rating, Watts	2000 PEP	2000 PEP
Side Rejection, dB	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)

## Rotatable Dipoles

Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.



MODEL	D40	D4	D3	D3W
Frequency, MHz	7	28, 21, 14, 7	28, 21, 14	24, 18, 10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350 40-125	>500	>200
Power Rating				
Watts PEP	2000	2000	2000	2000
Length ft	42.25	35.8	25.8	34.0
(m)	(12.88)	(10.92)	(7.86)	(10.37)
Mast Size, in (cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)



**CUSHCRAFT**  
CORPORATION



# MULTIBAND DIRECTIONAL YAGI

**6/2 Meter, 70 CM,**



## A627013S 6 Meter/2Meter/70 CM

Cushcraft's newest multiband directional yagi is designed to provide hobbyists who have limited tower or mast space with directional antenna performance on three of the most popular bands. The A627013S combines 6 meters, 2 meters and 70 centimeters on one boom. Since the three antennas were designed to share a common boom, the A627013S solves the often encountered problem of degraded antenna performance due to inadequate spacing when using separates.

MODEL	A627013S		
Frequency, MHz	50-54	144-148	430-450
No. Elements	3	5	5
Forward Gain, dBi	8	10	10
Front to Back Ratio, dB	20	20	18
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1	>4	>10
Power Rating, Watts PEP	1000	350	350
3dB Beamwidth, Degrees			
E Plane		48.5	48.5
H Plane		60	60
Boom Length, ft (m)		8.66 (2.66)	
Longest Element, in (cm)		117 (300)	
Turning Radius, ft (m)		6.16 (1.87)	
Mast Size Range, in (cm)		1.25-2 (3.2-5.1)	
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )		2.52 (0.23)	
Weight, lb (kg)		9.5 (4.3)	

- ▶ Outstanding performance thanks to Cushcraft's unmatched multiband design technology and experience.
- ▶ Rugged stainless steel mounting hardware is easy to install and maintain.



## Big Thunder Monobander

Cushcraft's XM240 monobander utilizes rugged Big Thunder hardware that combined with high strength aluminum tubing affords the antenna outstanding wind survivability. Phillystran boom trusses are used in the XM240 design for extra boom stability. The feed system is a 50 ohm direct feed with dual driven elements. VSWR is flat across the band. A high power 1:1 balun is included. The XM240 is field-proven for reliability and performance. Excellent front to back ratio and gain makes the XM240 the right choice for DX and for stacking as well.



Boom-to-Mast



Element Hardware

MODEL	XM240
Frequency, MHz	7.0 - 7.3
Number Elements	2
Forward Gain Free Space, dBi	6.0
Fwd Gain @ 1 Wavelength Ht, dBi @ 14 deg	12.5
Front to Back Ratio, dB	20-25
VSWR Typical Minimum	1.1:1
VSWR 1.5:1 Bandwidth, KHz	150
Power Rating, Watts Output	1500
3dB Beamwidth, Degrees	70
Side Lobe Attenuation, dB	>35
Boom Length, feet (m)	22 (6.7)
Boom Diameter, inches (cm)	2.5 (6.3)
Longest Element, feet (m)	43 (13.1)
Turning Radius, feet (m)	24.3 (7.4)
Max Mast Size, inches (cm)	2.5 (6.35)
Wind Surface Area, sq ft (sq m)	5.5 (1.51)
Wind Load @ 80 mph, lbs (kg)	142 (64.4)
Weight, lbs (kg)	55 (25)



# RINGO RANGER II, RINGO RANGER, RINGO

70 CM, 1 1/4 M, 2 M



ARX450B



ARX220B



ARX2B

Some hams comment on the ARX2B: "Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time." (N7PGH)

"ARX2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX2B...the best antenna." (XE2CLB)

## Our Ringos are Number One

Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you. Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

## Ringo Ranger II

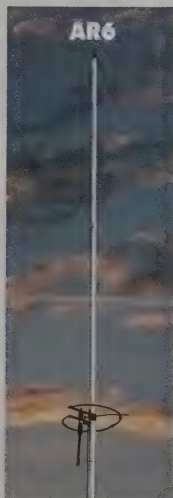
Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance.

MODEL	ARX2B	ARX220B	ARX450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dBi	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation			
Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft. (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25 (2.54-3.1)	1.0-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, lb (kg)	6 (2.7)	5 (2.3)	1 (.45)



AR2



AR6



AR10

## Ringo

These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

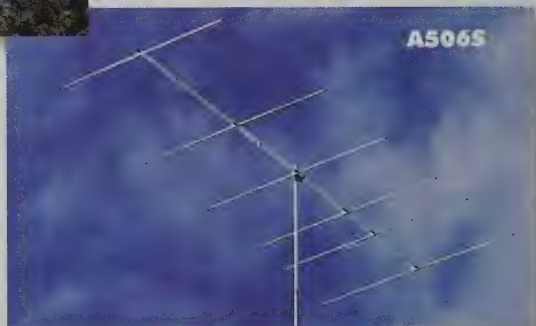
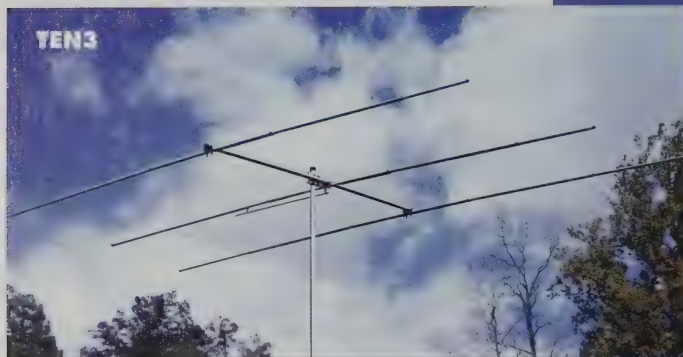
MODEL	AR2	AR6	AR10	AR450
Frequency, MHz	135-160	50-54	28-29.7	440-460
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	10	2	>1.5	20
Gain, dBi	3	3	3	3
Power Rating, Watts FM	1000	1000	1000	500
Radiation Angle, Deg.	16	16	16	16
Horizontal Radiation				
Pattern, Degrees	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.5 (1.3)
Height, ft. (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	1.4 (.43)
Mast Size Range, in (cm)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.21 (.02)	.37 (.03)	1.68 (.16)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1 (.45)





## 6 Meter Yagis - SSB/CW/FM

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis. The A503S, A505S and A506S may be mounted vertically for FM use.



## 10 Meters

Looking for a lightweight, economical alternative to the 10 meter big boys? Choose the TEN3. Although it's popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom (2.4m) making it easy to install on a very simple mount with only a light rotator. The matching system is our proven Reddi-Match for 50 Ohm no balun feed and SO-238 connector. Make more positive contacts with the TEN3.

MODEL	A503S	A505S	A506S	TEN3
Frequency, MHz:	50-54	50-54	50-54	28-29.7
No. Elements:	3	5	6	3
Forward Gain, dBi:	8	10.5	11.6	8
Front to Back Ratio, dB:	20	24	26	25
SWR 1.2:1 Typical:				
2:1 Bandwidth, MHz:	>1	>1	>1	>1.5
Power Rating, Watts PEP:	1000	1000	1000	1500
3dB Beamwidth, Degrees				
E Plane:	76	56	48	64
Boom Length, ft (m):	6 (1.8)	12 (3.7)	20 (6.1)	8 (2.44)
Longest Element, in (cm):	117 (300)	123 (312)	119 (302)	18 (5.49)
Turning Radius, ft (m):	6 (1.8)	7.8 (2.37)	11.5 (3.5)	9.8 (3.0)
Mast Size Range, in (cm):	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft2 (m2):	1.80 (0.17)	2.9 (0.273)	4.46 (.41)	2.0 (.20)
Weight, lb (kg):	7 (3.2)	11 (5.0)	18 (8.2)	9.9 (4.45)







# 70 CM, 1<sup>1</sup>/<sub>4</sub>M, 2 M

## UHF/VHF YAGIS

### A14820T 2 Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBi gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel. Separate coax feeds allow polarization changes.



### 224WB

#### 220 MHz Widebands

This 222 MHz 4 element beam is perfect for Packet, FM repeaters, or sideband/CW. It can be mounted for vertical or horizontal polarization.



MODEL	224WB	A14820T
Frequency, MHz	222-225	144-148
No. Elements	4	10/10
Forward Gain, dBi	10.2	13
Front to Back Ratio, dB	24	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>4
Power Rating, Watts PEP	1500	1000
3dB Beamwidth, Degrees		
E Plane	60	45
H Plane	88	50
Side Lobe Attenuation, dB E Plane	40	40
Boom Length, ft (m)	3 (.91)	11(3.4)
Electrical Wavelength	0.5	1.6
Longest Element, in (cm)	26.7 (68)	40.6 (103)
Turning Radius, ft (m)	3 (.91)	7.5 (2.3)
Mast Size Range, in (cm)	1.25-2	1.25-2
	(3.2-5.1)	(3.2-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.23 (.021)	0.39(0.11)
Weight, lb (kg)	1.7 (.77)	7 (3.15)

### A4496S/A44911S

Use one of these 440 MHz beams for your FM/Packet needs. Both work great for vertical or horizontal polarization.



MODEL	719B	A43011S	A4496S	A44911S
Frequency, MHz	430-450	430-440	440-450	440-450
No. Elements	19	11	6	11
Forward Gain, dBi	15.5	13.2	10.5	13.2
Front to Back Ratio, dB	25	20	18	20
SWR 1.2:1 Typical				
2:1 Bandwidth MHz	20	>10	>10	>10
Power Rating, Watts PEP	2000	350	350	350
3 dB Beamwidth, Degrees				
E Plane	24	48	60	48
H Plane	19			
Side Lobe Atten., dB, E Plane	60	40	30	40
Boom Length, ft (m)	13.5 (4.1)	4.6 (1.39)	2.9 (0.89)	4.4 (1.35)
Electrical Wavelength	6			
Longest Element, in (cm)	13.75 (34.9)	14 (35)	13 (33)	13 (33)
Turning Radius, ft (m)	7.25 (2.2)	2.8 (.85)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2	1.25-1.5	1.25-2.0	1.25-1.5
	(3.2-5.1)	1.25-1.5	(3.2-5.1)	1.25-1.5
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.2 (.11)	0.42 (0.04)	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	5.6 (2.55)	4 (1.8)	3 (1.4)	4 (1.8)



### 719B FM, CW and SSB 15.5 dBi

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.



**CUSHCRAFT**  
CORPORATION

# DIAMOND ANTENNAS

The Standard By Which All Others Are Judged.

Acclaimed as the technological leader in single & multiband antennas

- Wide-band Performance • Factory Adjusted—No Tuning Required • Highest Gain
- UPS Shippable • High Wind Rating • Fiberglass Radome • DC Grounded • Stainless Hardware

## X500HA (UHF-Conn.)

## X500HNA (Type-N Conn.)

### Ruggedized Base/Repeater Antenna

#### X50NA

The X50NA is an excellent choice where ruggedness is required in a medium-gain, dual-band, base/repeater application.

#### Features

- Wide frequency bandwidth
- Heavy duty fiberglass radome
- Stainless steel mounting hardware and radials
- Type-N Cable connection
- Compact size for easy mounting/installation

#### Specifications:

Freq.: 2m: 144-148MHz  
70cm: 440-450MHz  
Gain: 2m: 4.5dB; 70cm: 7.2 dB  
Power: 200 watts  
Wind Rating: 135 MPH (no ice)  
Height: 5.6 feet

#### X500HNA

Diamond Antenna's best base station repeater antenna. Designed for strength and performance, the X500HNA is pretuned to achieve maximum gain in both the 2m and 70cm amateur bands.

#### Features

- Heavy duty fiberglass radome
- Overlapping outer shells for added strength
- Stainless steel mounting hardware and radials
- Strong, waterproof joint couplings
- Type-N Cable connection
- Wide band performance

#### Specifications:

Freq.: 2m: 144-148MHz 70cm: 440-450MHz  
Gain: 2m: 8.3dB; 70cm: 11.7 dB  
Power: 200 watts  
Wind Rating: 90 MPH (no ice)  
Height: 17.8 feet

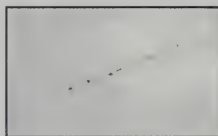


X50NA

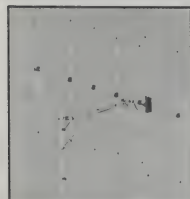
X500HNA



A502HB



A504HB

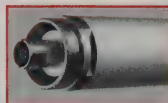


A14455

#### NOTES:

- 1 Heavy duty aluminum construction.
- 2 F-718A: 440-450MHz; F718L: 420-430MHz.
- 3 X510N: 144-147/430-440MHz.
- 4 1/4", rated in dB.
- 5 2m: 146-148; 100 watts
- 6 52.5MHz only

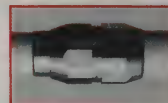
BAND: 144-148MHz; 222-222-225MHz; 420-420-430MHz; 430-430-440MHz; 440-440-450MHz; 1240-1240-1300MHz.



COAX CONNECTION  
AT BASE END



HEAVY DUTY BASE/  
RADIAL ASSEMBLY



STRONG JOINT  
COUPLINGS

## DIAMOND Mono-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
CP22E <sup>1</sup>	144	6.5	200	UHF	9.0	70
DPGH62 <sup>1</sup>	50	6.0	200	UHF	21.0	78
F22A	144	6.7	200	UHF	10.5	112
F23A	144	7.8	200	UHF	15.0	90
F718A <sup>2</sup>	440	11.5	250	N	15.0	90
G200	2.4GHz	11 dBi	—	N	4.8	135

## DIAMOND Dual-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
X50A	144/440	4.5/7.2	200	UHF	5.6	135
X50NA	144/440	4.5/7.2	200	N	5.6	135
X200A	144/440	6.0/8.0	200	UHF	8.3	112
X510NA <sup>3</sup>	144/440	8.3/11.7	200	N	17.2	90
X510MA	144/440	8.3/11.7	200	UHF	17.2	90
X500HNA	144/440	8.3/11.7	200	N	17.8	90+
X700HNA	144/440	9.3/13.0	200	N	24.0	90
U200	440/1240	8.3/11.7	100	N	5.9	135

## DIAMOND Tri-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
V2000A <sup>4,6</sup>	52/144/440	2.1/6.2/8.4	150	UHF	8.3	110
X3200A <sup>5</sup>	146/222/440	6.0/7.8/8.0	100/200	UHF	10.5	112
G6000A	144/440/1240	6.5/9.0/10.0	100/60	N	10.5	112

Most requirement: 1.4" 2.4"

## DIAMOND Yagi Antennas

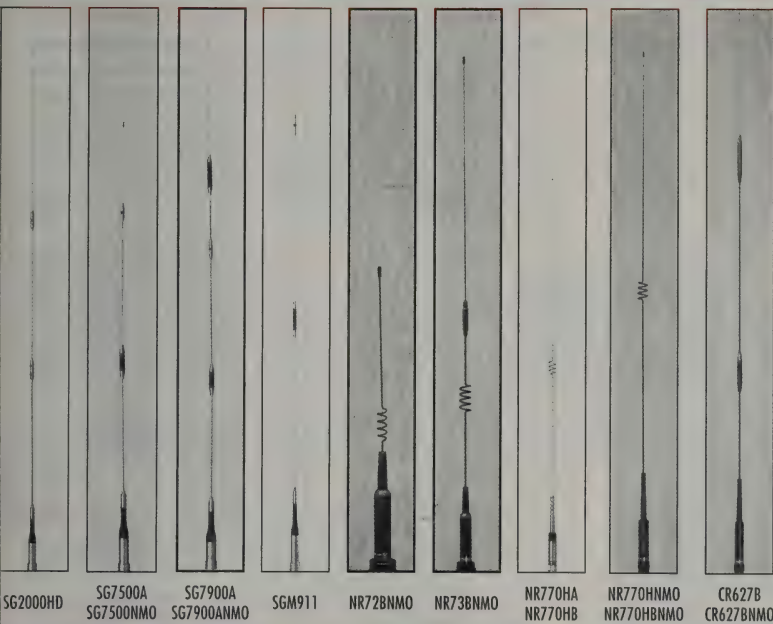
MODEL	BAND (MHz)	GAIN (dBi)	WATTS (PEP)	CONN.	BOOM LNTH.	ELEMENT PHASING
A502HB	50	6.3	400	UHF	2.6'	2 element
A504HB	50	10.8	400	UHF	10.7'	4 element
A144S5	144	9	100	UHF	37.5"	5 element
A430S10	432	13	100	UHF	43"	10 element
A430S15	432	14.8	100	UHF	89"	15 element



# DIAMOND'S STATE-OF-THE-ART

VHF/UHF And HF/VHF Mobile Antennas—  
 Maximum Performance Without Compromise

**You've seen the rest...now own the BEST!**



## HV7A Mobile Antenna System

For New HF/VHF transceivers

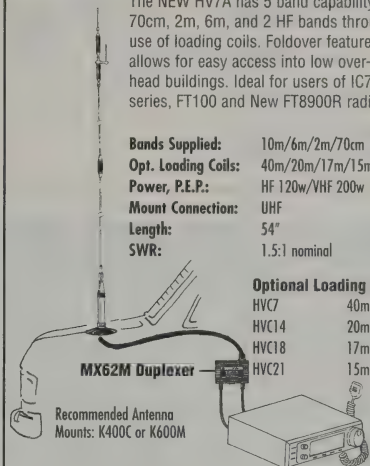
(Such as: IC706 series, FT100 & NEW FT8900R)

The NEW HV7A has 5 band capability: 70cm, 2m, 6m, and 2 HF bands through use of loading coils. Foldover feature allows for easy access into low overhead buildings. Ideal for users of IC706 series, FT100 and New FT8900R radios.

**Bands Supplied:** 10m/6m/2m/70cm  
**Opt. Loading Coils:** 40m/20m/17m/15m  
**Power, P.E.P.:** HF 120w/VHF 200w  
**Mount Connection:** UHF  
**Length:** 54"  
**SWR:** 1.5:1 nominal

### Optional Loading Coils

HVC7 40m  
 HVC14 20m  
 HVC18 17m  
 HVC21 15m



MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
MR77	2m/70cm	2.15/3.4	70	MAG	20	1/4λ, 1/2λ
MR77SMA	2m/70cm	2.15/3.4	70	MAG	20	1/4λ, 1/2λ
NR72BNMO* <sup>6</sup>	2m/70cm	2.15	100	NMO	13.8	1/4λ, 1/2λ
NR73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2λ, 1-5/8λ
NR770HA <sup>7</sup>	2m/70cm	3.0/5.5	200	UHF	40.2	1/2λ, 2-5/8λ
NR770HNMO <sup>8</sup>	2m/70cm	3.0/5.5	200	NMO	38.2	1/2λ, 2-5/8λ
NR770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2λ, 2-5/8λ
NR7900A*	2m/70cm	3.7/6.4	300/250	UHF	57	1/4+1/2λ, 3-5/8λ
SG7000A* <sup>6</sup>	2m/70cm	2.15/3.8	100	UHF	18.5	1/4λ, 6/8λ
SG7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2λ, 2-5/8λ
SG7500NMO	2m/70cm	3.5/6.0	150	NMO	41.0	1/2λ, 2-5/8λ
SG7900A*	2m/70cm	5.0/7.6	150	UHF	62.2	7/8λ, 3-5/8λ
SG7900ANMO*	2m/70cm	5.0/7.6	150	NMO	62	7/8λ, 3-5/8λ
SGM510	2m/70cm	2.15/5.5	100	UHF	37	1/2λ, 2-5/8λ

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
CR8900A* <sup>6, 11</sup>	10m/6m/2m/70cm	2.1 (2m) 5.5 (70cm)	60	UHF	50	1/4λ, 1/4λ 1/2λ, 2-5/8λ
SG2000HD*	2m	5.2	250	UHF	62.6	1/2λ+3/8λ
CR320A* <sup>6</sup>	2m/1-1/4m/70cm	2.15/3.8 5.5	200/100 200	UHF	37.4	1/4λ, 1/2λ 2-5/8λ
CR627B* <sup>6, 9</sup> CR627BNMO* <sup>6, 9</sup>	6m/2m/70cm	2.1/4.5 7.2	120	UHF/NMO	60	1/4λ, 1/2+1/4λ 2-5/8λ
HF6FX* <sup>6</sup>	6m	2 dBi	250	UHF	40	1/4λ
HF50CX* <sup>6</sup>	6m	3.5 dBi	200	UHF	75	3/8λ
NR22L*	2m	6.5	100	UHF	96.8	2-5/8λ
NR2000NA	2m/70cm/23cm	3.15/6.3/9.7	100	N	39	1/2λ, 2-5/8λ 5-5/8λ
M285* <sup>10</sup>	2m	3.4	200	UHF	52.4	5/8λ
M685* <sup>6</sup>	6m	2.15 dBi	200	UHF	52.4	1/4λ
MG200	2.4GHz	7 dBi	-	N	23.6	3-1/2λ
SGM911* <sup>6, 9</sup>	6m/2m/70cm	2.15/3/5.8	60	UHF	41	1/4λ, 1/2λ, 2-5/8λ
NR124	23cm	8.4	100	N	25	4-5/8λ

\* Not recommended for Magnet Mount

<sup>6</sup> Grounding required

<sup>7</sup> NR770HB same specs but in black finish.

<sup>8</sup> NR770HNMO same specs but in black finish.

<sup>9</sup> 52-54MHz only

<sup>10</sup> Tunable from 140-174MHz

<sup>11</sup> FM only

1/4λ, rated in dBi.



## FOLD-OVER

Patented One-Touch Fold-Over Feature.

(Not available on M285, M685, MG200, MR77, MR77SMA, NR72BNMO & NR73BNMO)

[www.rfparts.com/diamond](http://www.rfparts.com/diamond)



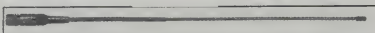
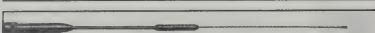
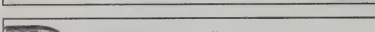
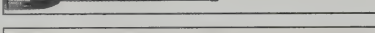
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# DIAMOND Antenna Accessories

## High Efficiency HT & Scanner Antennas HF Multiband Vertical Antenna Duplexers & Triplexers Dummy Loads & Coaxial Switches

### RH and SRH Series

High quality, high gain HT antennas for mono, dual, and tri-band handheld radios. Available in both BNC and SMA connections. Increase the performance on your handheld or wideband scanner with a Diamond RH or SRH Series antenna.

<b>RH3</b>		<b>SRH805</b>		SMA
<b>RH77CA</b>				
<b>RH951S</b>				
<b>SRH519 &amp; SRH815</b>				SMA
<b>SRH999</b>				SMA

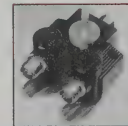
MODEL	DESCRIPTION	RELATIVE GAIN*
RH3	2m/70cm dual band "Black Bullet" HT antenna. 1.75" BNC. 120 to 900 receive	-2 dB
RH77CA	High gain 2m/70cm dual band HT antenna. Receive range to 900 MHz. BNC.	+6 dB
RH205	2m HT antenna, telescopic, 5/8λ fully extended, 47.5"; 1/4λ retracted, 9"	+9 dB
RH519	2m/70cm slim dual-band HT antenna. Flexible. 8" BNC, 10 watts.	+3 dB
RH707	2m/70cm dual-band -tiltable whip - HT antenna. 8 1/4" BNC.	+3 dB
RH951S	High gain 2m/70cm/23cm slim tri-band HT antenna. Flexible. BNC (Wide band receive) +6 dB	+6 dB
SRH77CA	High gain 2m/70cm dual band flexible HT antenna. 15" SMA, 10 watts.	+6 dB
SRH320A	2m/1-1/4m/70cm tri-band HT antenna. Flexible. SMA. 10 watts.	+3dB
SRH519	2m/70cm dual-band HT antenna. Flexible. 8" SMA, 10 watts.	+3 dB
SRH805	2m/70cm/23cm tri-band HT antenna. 1.75" SMA, 10 watts.	-2 dB
SRH815	2m/70cm/23cm tri-band HT antenna. Flexible. 6" SMA, 6 watts.	+3dB
SRH999	6m/2m/70cm/23cm quad-band HT antenna. Flexible. 19.5" SMA, 10 watts.	+3dB

\* Rated against typical stock HT antennas.

### DL30A/DL30N



### CX210A/CX210N



### CX310A

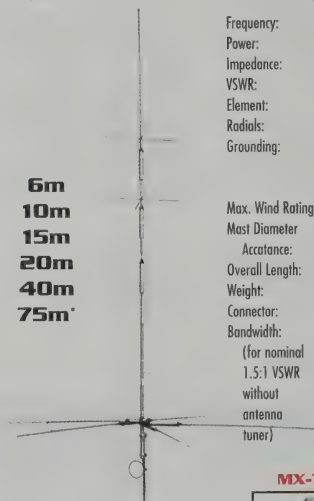


MODEL	DESCRIPTION
CA23RS	Lightning surge protector, DC-2500 MHz, 200W Type-N (F)
CA23RW	Lightning surge protector, DC-2500 MHz, 200W Type-N (F) Waterproof.
CX210A	Heavy duty wideband coax switch, DC-1000 MHz. 1.5 kW, 50-239
CX210N	Heavy duty wideband coax switch, DC-1500 MHz. 1.5 kW, Type N
CX310A	Heavy duty wideband coax switch, 3 position, DC-800MHz, 50-239
DL30A	Dummy load, DC-500 MHz. 15w average/100w peak. PL-259
DL30N	Dummy load, DC-500MHz. 15w average/100w peak. Type N

### CP6A HF MULTIBAND VERTICAL

The New CP6A multi-band trap-vertical antenna for HF bands, covering the 75\*, 40, 20, 15, 10 and 6m amateur bands. Made from heavy-duty aluminum, the CP6A assembles easily, yields excellent performance and reliability from a compact base station antenna. Its compact size allows for many mounting options. Minimum 15 feet diameter required for mounting radials. No additional ground radials required. Mounting hardware included.

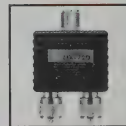
\*75m requires a tuner.



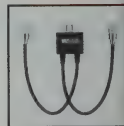
#### Specifications

Frequency:	75*/40/20/15/10/6m
Power:	200w PEP
Impedance:	50Ω
VSWR:	1.5:1 nominal
Element:	1/4 wave trap vertical
Radials:	Trap design, six
Grounding:	Direct grounding.
	Antenna element & radials connected to mounting pipe.
	80mph (no ice)
Max. Wind Rating:	
Most Diameter	
Accutance:	1.2-2.4"
Overall Length:	15.10' (4.6m)
Weight:	9.9lbs. (4.9kg)
Connector:	50-239 female UHF
Bandwidth:	75m 20kHz
(for nominal	40m 40kHz
1.5:1 VSWR	20m 100kHz
without	15m 200kHz
antenna	10m 500kHz
tuner)	6m 3.5MHz








### MX-72D



### MX-72H/N



### Duplexers/Triplexers

MODEL	MX72D	MX72H	MX72N	MX2000			MX62M	
FREQUENCY BAND (MHz)	LFP 1.6-30	HPF 140-150	HPF 400-460	LFP 1.6-60	BPF 110-170	HPF 300-950	LFP 1.6-56	HPF 76-470
PWR CW (ICAS) WATTS P.E.P.	400 1000	150 400	100 250	800 800	500		600	
THRU LOSS/dB	0.15	0.15	0.25	0.15	0.2	0.25	0.2	0.3
ISOL		60dB			60dB			50dB
VSWR		1.2:1			1.2:1			1.2:1
CONNECTOR COMPLEMENT								
CONNECTOR	Direct	12" Cable w/Connectors		12" Cable w/Connectors			12" Cable w/Connectors	





# DIAMOND'S Premium Antenna Mounts & Cable Assemblies

## Designed for today's high performance antennas

### K9000

#### Motorized Mount

Raise and lower your antenna with a touch of a button. Vertical adjustment 0-9°. Accepts "ground independent" antennas up to 45". Recommended antennas: SG7500NMO, NR73BNMO, SG7500A, NR2C and NR770 series.

**K9000TM** Trunk/Hatchback Mount  
**K9000LRM** Luggage Rack Mount



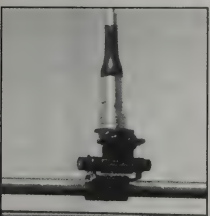
\* Includes SMA to UHF adapter.

### K400

#### Heavy Duty Hatchback/Door/Truck Lid Mount

Diamond's deluxe heavy duty mount. Two-axis adjustable. 4" wide mounting base with 4 set screws for maximum strength. Recommended for high gain VHF/UHF antennas.

**K400C\*** SO-239 base, 6.5' coax & PL-259  
**K400CNMO\*** NMO base, 6.5' coax & PL-259  
**K400-3/8C\*** 3/8x24 base, 6.5' coax & PL-259  
**K400S\*** SO-239 base, 13.5' coax & SMA  
**K400SNMO\*** NMO base, 13.5' coax & SMA

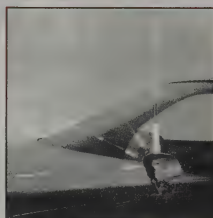


### K601

#### Hide-Away Mount

Folds antenna safely into trunk. Fully adjustable, fits most vehicles. Recommended antennas: NR2C, NR73BNMO, NR770HNM, NR770HA, NR770HBNMO, NR770HB, NR770RA, SG7500A, SG7500NMO and SGM510.

**K601M** SO-239 base, 6.5' coax & PL-259  
**K601NMO** NMO Base, 6.5' coax & PL-259



\* Use C-Series cable assemblies.

### K600

#### Variable Angle Trunk Mount

Deluxe aerodynamic trunk mount. Vertical adjustment 0-9°. 4" wide mounting base with 4 set screws for maximum strength. Recommended for high gain VHF/UHF antennas.

**K600M** SO-239 base, 16.5' coax & PL-259  
**K600S\*** SO-239 base, 13.5' coax & SMA



\* Use C110 for front radio installations.

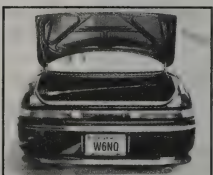
\* Includes SMA to UHF adapter.

### K540

#### Mirror/Luggage Rack Mount

Adjustable Mirror/Luggage rack mount accepts 1/2" to 7/8" tubing. Fits most mirrors and utility racks. Recommended for antennas under 45".

**K540KM** SO-239 base, 13' coax & PL-259  
**K540** Mount Only



\* Use C110 for front radio installations.

### K515

#### Universal Luggage Rack Mount

Ideal for new SUV luggage racks; accepts 3/4" to 2-1/4" in height and up to 2-1/4" wide. Two axis adjustable mount for light-weight VHF/UHF antennas under 45", not requiring RF ground.

**K515S\*** SO-239 base, 13.5' coax & SMA  
**K515SNMO\*** NMO base, 13.5' coax & SMA

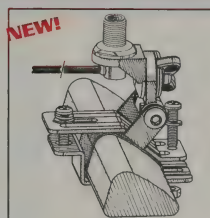


### K412

#### Deluxe Hatchback/Door/Trunk Lid Mount

Two-axis adjustable mount for light weight antennas. 1.5 inch mounting width. Ideal for tight mounting options. Recommended for antennas under 45".

**K412C** SO-239 base, 6.5' coax & PL-259  
**K412CNMO** NMO base, 6.5' coax & PL-259  
**K412S\*** SO-239 base, 13.5' coax & SMA  
**K412SNMO\*** NMO base, 13.5' coax & SMA



### K550

#### Luggage Rack Mount

Adjustable luggage rack mount for new mini vans. Recommended for antennas under 45".

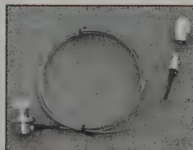
**K550KM** SO-239 base, 13' coax & PL-259  
**K550** Mount Only



\* Use C110 for front radio installations.

\* Includes SMA to UHF adapter.

## C-SERIES CABLE ASSEMBLIES



### C101

SO-239 base, 6.5' RG316 Teflon coax & PL-259. Ideal cable assembly for trunk mount radios.

### C101NMO

Same as C101 with NMO base. For Diamond's K-Series mounts.

### C213

Same as C101, 13.5' length.

### C213NMO

Same as C101NMO, 13.5' length.



### C110

Extension for C101. 10' RG8X coax w/mini UHF Conn. Use C110 to extend cable for front radio installations.

### C110BNC

10' assembly similar to above, uses RG316 Teflon coax terminating in BNC-male.

### C110SMA

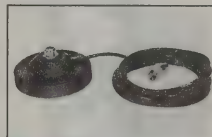
Similar to C110BNC, terminating in SMA male.



### K702M

#### Magnet Mount Base

Deluxe low profile magnet mount with high holding power. Aerodynamic styling, large 6 3/8" dia., 3/4" h. For VHF/UHF antennas up to 50" h. Includes thin mylar protective sheet to enhance grip and protect paint. Cable: 13' RG58A/U & PL-259.



### SPM35

#### Magnet Mount Base

Heavy duty 2.2 lb./4" magnet mount rated 25-500 MHz. Cable: 13' coax and PL-259. Recommended for antennas under 45".

### SPM-NMO

#### Magnet Mount Base

Similar to the SPM35, but has NMO mount.



### C211

SO-239 base, 16.5' cable assembly & PL-259. Combination of C101 & C110.

### C104SMA

4' extension cable for HT's with SMA connector. For existing cable assemblies with PL-259. UHF female (SO-239) to right angle SMA male.

### C105SMA

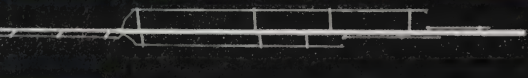
5' extension cable for C101. RG58/U cable, terminating in right angle SMA male.

[www.rfparts.com/diamond](http://www.rfparts.com/diamond)

Diamond Antenna Division of RF Parts Co. Tel: (760) 744-0900 • FAX: (760) 744-1943 • [diamondantenna@rfparts.com](mailto:diamondantenna@rfparts.com)

# GAP: THE PERFECT ANTENNA

We at GAP realize there isn't a perfect antenna. No singular antenna will stream DX on 80 and be the best for local nets on 10. If anyone tells you there is, beware! The perfect antenna does not exist, but the right one for you may. If you want something to bust the pile on the low bands, then consider the Voyager. Just starting out in ham radio and need a great general coverage antenna, the Challenger is easy to assemble and for little effort will yield superior performance, especially on DX. Maybe you knowingly or unknowingly moved into one of those "restricted areas" where the Eagle's limited visibility, but unlimited ability is desired.



Eagle DX

Challenger DX

Voyager DX

This chart helps you select the right GAP antenna. When comparing GAPs, bandwidth is not a concern. With few exceptions, a GAP yields continuous coverage under 2:1 for the ENTIRE BAND.

All antennas utilize a GAP elevated asymmetric feed. A major benefit is the virtual elimination of the earth loss, so more RF radiates into the air instead of the ground. This feed is why a GAP requires **NO RADIALS**. Just as elevating a GAP offers no significant improvement to its performance, adding radials won't either, making set up a breeze.

A GAP antenna has no traps, coils or transformers. This is important. The greatest source of failure in multiband antennas are these devices. Perhaps you heard someone discuss a trap that had melted, arced or became full of water. Improvements to these inherent problems are the focus of the antenna manufacturer, while the basic design of the antenna remains unchanged. **GAP improved the trap by eliminating it!** Removing these devices means they don't have to be tuned and, more importantly, won't be detuned by the first ice or rain. The absence of these devices improves antenna reliability, stability and increases bandwidth.

Another major advantage to a GAP antenna is its NO tune feature. Screws are simply inserted into predrilled holes with a supplied nutdriver.

The secret is out and people in the know say:

**CQ**—The GAP consistently outperformed base-fed antennas...and was quieter."

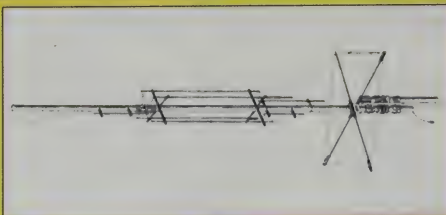
**73**—This is a real DX antenna, much quieter than other verticals."

**RF**—To say this antenna is effective would be a real understatement. Switching back and forth on 40m between another multiband HF vertical and the GAP there was no comparison. Signals were always stronger on the GAP, sometimes by 5 units, not just DBs."

**Worldradio**—These guys have solved the problem associated with verticals. That is, an awful lot of RF is wallowing around and dropping into the dirt instead of going outward bound. A half-wave vertical does need radials if it is end fed (at the bottom). But the same half-wave vertical does not (as much, hardly at all) if it is fed in the center."

**IEEE**—Near field and power density analyses show another advantage of this antenna [asymmetric vertical dipole]: it decreases the power density close to the ground, and so avoids power dissipation in the soil below it. The input impedance is very stable and almost independent of ground conductivity. This antenna can operate with high radiation efficiency in the MF AM standard broadcast band, without the classical buried ground plane, so as to yield easier installation and maintenance."

Latest Release: TITAN DX



This all purpose antenna is designed to operate 10m-80m. WARC bands included. It sits on a 1-1/4" pipe and can be mounted close to the ground or up on a roof. Its bandwidth and no tune feature make it an ideal antenna for the limited space environment as well as a terrific addition to the antenna farm.

# GAP

ANTENNA  
PRODUCTS, INC.

99 N. Willow Street  
Pellisier, FL 32948

tel: (561)-571-9922

web: gapantenna.com

TO ORDER, CALL AES...

1-800-558-0411

MODEL	BANDS OF OPERATION										HT	WT	MOUNT	COUNTER-POISE
	2m	6m	10m	12m	15m	17m	20m	30m	40m	80m				
Challenger DX	■	■	■	■	■	■	■	■	■	■	31.5'	21 lbs	Drop In Ground Mount	3 Wires @ 25'
Eagle DX			■	■		■	■		■	■	21.5'	19 lbs	1-1/4" pipe	80" Rigid
Titan DX			■	■	■	■	■	■	■	■	25'	25 lbs	1-1/4" pipe	80" Rigid
Voyager DX							■		■	■	45'	39 lbs	Hinged Base	3 Wires @ 57'

See Price List for GAP Quick-Tilt Mounts, Counterpoise and Guy Kit Prices





### Model G3-144

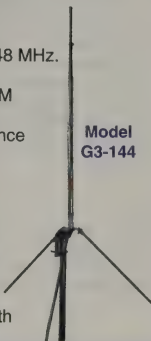
The G3-144 is the newest addition to the Hustler Base Station line. Designed with the cost conscious amateur in mind, this small, inexpensive antenna delivers more gain than other antennas in its price range. Ideal for a home or emergency command post

#### ELECTRICAL

- Frequency Range: 144-148 MHz.
- Gain: 3 dB
- Maximum Power: 1 KW FM
- Bandwidth: 4 MHz
- VSWR: < 1.5:1 @ resonance
- Impedance: 50 ohms

#### MECHANICAL

- Termination: SO-239
- Length: 7' 5"
- Weight: 2.0 lbs
- Wind Survival: 100 mph.
- Wind Area: 0.5 ft.<sup>2</sup>
- Mounting: 1 to 1 3/4"
- Construction: High strength fiberglass & aluminum.



Model  
G3-144

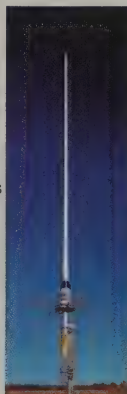
### Model G6-270R Dual band 2 Meter & 440 MHz

#### ELECTRICAL

- Frequency range: 144-148 MHz, 435-455 MHz.
- Gain: 6 dB
- Maximum power: 100 Watts
- Bandwidth: 4 MHz – 2 Meters 10 MHz – 440 Meters
- VSWR: < 1.5:1 @ resonance
- Impedance: 50 ohms

#### MECHANICAL

- Termination: N female
- Length: 7' 6"
- Weight: 5.3 lbs.
- Wind Survival: 100 mph
- Wind Area: 1.4 ft.<sup>2</sup>
- Mounting: Up to 1 3/4"
- Construction: one piece radome



G6-270R

### Model G6-440

(see photo above)

#### ELECTRICAL

- Frequency range: 440 - 450 MHz.
- Gain: 6 dB
- Maximum power: 1 KW FM
- Bandwidth: 10 MHz.
- VSWR: < 1.5:1 @ resonance
- Impedance: 50 ohms

#### MECHANICAL

- Termination: Type N female
- Length: 7' 3"
- Weight: 5.0 lbs.
- Wind survival: 100 mph.
- Wind Area: 1.4 ft.<sup>2</sup>
- Mounting: Up to 1 3/4"
- Construction: one piece radome

### VHF and UHF Omni Directional Fixed Station Vertical Antennas

### Model G7-144

#### Two Meter

The G7-144 is totally self supporting and is easily assembled. When disassembled the longest part is approximately 4' which makes it easy to handle and ship via UPS.

#### ELECTRICAL

- Frequency Range: 144 - 148 MHz.
  - Gain: 7 dB
  - Maximum Power: 1 KW FM
  - Bandwidth: 4 MHz.
  - VSWR: < 1.5:1 @ resonance
  - Impedance: 50 ohms
- #### MECHANICAL
- Termination: N female
  - Length: 15' 4"
  - Weight: 10.0 lbs.
  - Wind survival: 100 mph
  - Wind Area: 0.96 ft.<sup>2</sup>
  - Mounting: Up to 1 3/4"
  - Construction: High strength fiberglass & aluminum.



### Model G6-144B

#### Two Meter

(see photo above)

#### ELECTRICAL

- Frequency range: 143 - 149 MHz.
- Gain: 6 dB
- Maximum power: 1 KW FM
- Bandwidth: 6 MHz.
- VSWR: < 1.5:1 @ resonance
- Impedance: 50 ohms

#### MECHANICAL

- Termination: SO-239
- Length: 9' 9"
- Weight: 6.8 lbs.
- Wind survival: 100 mph.
- Wind Area: 1.4 ft.<sup>2</sup>
- Mounting: Up to 1 3/4"
- Construction: High strength fiberglass & aluminum.

### Model G7-220

(see photo above)

#### ELECTRICAL

- Frequency range: 220 - 225 MHz.
- Gain: 7 dB
- Maximum power: 1 KW FM
- Bandwidth: 5 MHz.
- VSWR: < 1.5:1 @ resonance
- Impedance: 50 ohms

#### MECHANICAL

- Termination: Type N female
- Length: 10' 2"
- Weight: 7.0 lbs.
- Wind survival: 100 mph.
- Wind Area: 0.96 ft.<sup>2</sup>
- Mounting: Up to 1 3/4"
- Construction: High strength fiberglass & aluminum.

### Fixed Station Multi-Band HF Vertical Antennas

Our exclusive trap design offers the lowest loss possible. A special extrusion process allows us to produce trap covers to an otherwise unattainable close tolerance, assuring accurate and permanent resonance. Our highly accurate traps provide top signal reports and consistent contacts.

Accurate tuning is made possible by the wide range of tuning flexibility designed into our verticals. Not only can you use the normal adjustable tubing to change resonance, but the traps themselves can be field tuned for an additional 2 MHz. shift. This flexibility will enable you to achieve a good S.W.R. even if your installation is not ideal.

- Broadbanded – low VSWR at band edges
- Power capability – full legal limit on SSB or CW
- Solid one inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss, high strength insulators.
- Stainless steel clamps and hardware.
- Easy assembly and tuning.
- Single line feed with any length of 50 ohm coax.
- Use as ground mount with or without radials, or elevated mount with radials.
- All of the BTVs can be mounted in a piece of PVC and disguised as a flagpole in deed restricted neighborhoods.

### Model 6-BTV

Bands 10-15-20-30-40 & 75 or 80 meters  
Length/weight 24 ft. / 16.5 lbs.  
Mounting Vertical support up to 1.75" O.D.  
Wind Load 29 lbs. @ 70 mph.  
Power capability Full legal limit SSB/CW  
VSWR at resonance 1.15 to 1 or better  
Bandwidth VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. On 75 or 80 meters)

### Model 5-BTV

Bands 10-15-20-40 & 75 or 80 meters  
Length/weight 25 ft. 5 in. / 16.5 lbs.  
Mounting Vertical support up to 1.75" O.D.  
Wind Load 29 lbs. @ 70 mph.  
Power capability Full legal limit SSB/CW  
VSWR at resonance 1.15 to 1 or better  
Bandwidth VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. On 75 or 80 meters)

### Model 4-BTV

Bands 10-15-20-40 meters  
Length/weight 21 ft. 5 in. / 15 lbs.  
Mounting Vertical support up to 1.75" O.D.  
Wind Load 28 lbs. @ 70 mph.  
Power capability Full legal limit SSB/CW  
VSWR at resonance 1.15 to 1 or better  
Bandwidth VSWR 1.6:1 at band edges

### Model 30-MTK

30 meter add on kit for the 4 and 5 BTV

### The Spirit Series

Hustler's omnidirectional, collinear design base station antennas are enclosed in a rugged fiberglass radome that will help minimize pattern variations due to high winds or extreme conditions. We offer these antennas in 144, 220, 440, 900 MHz and 1.2 Ghz. The gain will be unity, 3,6,9, or 12 dB depending on the frequency. Custom frequencies available, call AES for a quote.

[www.new-tronics.com](http://www.new-tronics.com)

**New-Tronics Antenna Corporation**  
One New-Tronics Place  
Mineral Wells, Texas 76067-9563

Phone: **940.325.1386**  
Toll Free: **877.994.9499**  
Fax: **940.328.1409**

## Unity Gain

### THF

#### VHF/UHF Trunk Lip Mount Antennas.

- Frequency range: 140-500 MHz
- ¼ wave length
- Cut length for low VSWR
- 15 ft RG58/U with PL-259 connector



### UHT-1

#### VHF/UHF Roof/Deck Hole Mount Antenna.

- Frequency range: 140-500 MHz
- ¼ wave length
- Cut length for low VSWR
- 15 ft RG58/U

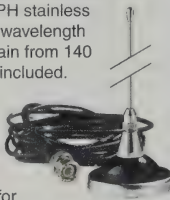


### UGM

#### VHF/UHF Magnetic Mount Antenna

Extend the range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to ¼ wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included.

Highly efficient mylar protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 10 ft. of mini-coax with BNC connector



### MKR-2 Radial Kit

Used to convert RX, SF & CG series coils to fixed station operation. Mount can accept any 3/8x24 threaded coil and contains three radials



## Collinear

### Series Fed Mobile Antennas

SF-2 144 MHz 3.4 dB

SF-220 220 MHz 3.4 dB

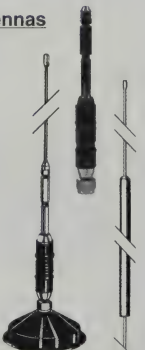
- Power rating: 100 watts
- 3/8" x 24 thread
- 5/8 wave

RX-2 144 MHz 3.4 dB

RX-220 220 MHz 3.4 dB

RX-440 440 MHz 5.0 dB

- Coil same as above
- 3 oz magnet
- 15 ft RG-58/U coax
- PL-259 connector



## Collinear High Gain

### Mobile Antenna

CG-144 5.2 dB 6 MHz

Bandwidth

CG-220 5.2 dB 4 MHz Bandwidth

- Power rating: 200 watts
- 3/8"x24 thread
- 5/8 over ¼ wave
- Collinear design

CGT-144 5.2 dB 6 MHz Bandwidth

CGT-220 5.2 dB 4 MHz Bandwidth

- Coil same as above
- Swivel ball for vertical positioning
- Quick disconnect for easy removal
- Trunk mount base
- 17 ft RG58/U coax
- PL-259 connector



## New-Tronics Antenna Corporation

One New-Tronics Place  
Mineral Wells, Texas 76067-9563

# VHF and UHF Mobile Antennas

## MX Series NMO Magnetic Mount Antenna

MX-2 144 MHz 3.4 dB

MX-220 220 MHz 5.0 dB

MX-440 440 MHz 5.0 dB

- Power rating: 200 watts

- Chrome top
- NMO style coil
- 10 oz magnet
- 17 ft RG58/U coax & PL-259 connector

MX-2B 144 MHz 3.4 dB

MX-440B 440 MHz 5.0 dB

- Same as above but all black coil



## BBG Series NMO Swivel Ball & Spring Antenna

BBG-144 3.4 dB

BBG-440-5 5.0 dB

- Power rating: 200 watts

- NMO style coil
- Chrome top, swivel ball and spring

BBGT-144 3.4 dB

BBGT-440-5 5.0 dB

- Same coil as above
- Includes Trunk mount
- 17 ft RG58/U coax & PL-259 connector



## Dual Band 2 meter/ 70cm Mobile Antennas

Hustler's new Dual Band antennas are designed to perform even in the toughest environments. Base coils are ultrasonically welded to ensure mechanical integrity and durability.

### LMC-270

- 2.4 dB/4.0 dB gain
- Power rating: 100 watts
- NMO style coil
- Coil and whip only

### MX-270

- 2.4 dB/4.0 dB gain
- Power rating: 100 watts
- NMO style magnetic mount
- 17 ft RG58/U coax & PL-259 connector



## LM Series NMO Coils

LMG, LMC AND LMB Antennas are coil & whip only and require an NMO mount.

LMG-144 3.4 dB gain

LMG-440-5 5.0 dB gain

- Power rating: 200 watts

- NMO style coil
- Chrome top and bottom
- Contact-silver plated push pin

LMC-144 3.4 dB gain

LMC-440-5 5.0 dB gain

- Power rating: 200 watts

- NMO style coil
- Black coil with chrome top
- LMB-144 3.4 dB gain
- LMB-440-5 5.0 dB gain

- Power rating: 200 watts

- NMO style coil
- Black coil

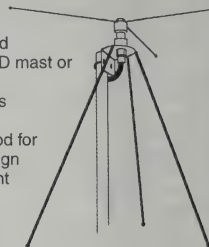


## Scanner Base Station Antenna

Hear more at a greater distance with Hustler's external omnidirectional scanner antennas.

### DCX

- 40 - 950 MHz
- Vertically polarized
- Mounts to 1 ¼" OD mast or flat surface
- 55" cone elements
- 20" disc elements
- Solid aluminum rod for high strength design
- Hardware & mount included



### DCL

- Same as DCX
- 50 ft RG58/U coax with PL-259 on one end and BNC or Pin plug on the other end

## Mobile Scanner Antenna

Hear all of the action in your car. Covers 30-50, 148-174, 430-450, 800-950 MHz

### MRM

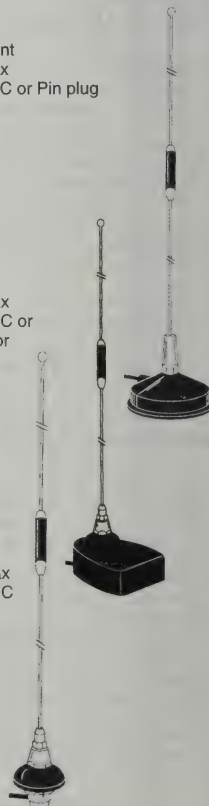
- 3 oz Magnet mount
- 12 ft RG58/U coax
- Available with BNC or Pin plug connector

### MOT

- Trunk mount
- 15 ft RG58/U coax
- Available with BNC or Pin plug connector

### MOR

- ¾" Roof or deck mount
- 12 ft RG58/U coax
- Available with BNC or Pin plug connector



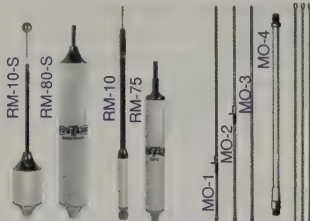
Phone: 940.325.1386  
Toll Free: 877.994.9499  
Fax: 940.328.1409



# Amateur HF Mobile 10,12,15,17,20,30,40,60,75 and 80 Meter

If you are serious about HF mobile operation the **Hustler** HF Mobile System is the obvious choice. **Hustler** manufactures and sells more HF mobile antennas world wide than anyone. No other manufacturer offers the convenience, the flexibility or the pure performance that **Hustler** does. Our HF Mobile System offers a wide variety of components which enable you to customize your installation to fit your present and future needs. A choice of four different support masts provides an installation solution for every vehicle. A selection of eighteen interchangeable resonators in high and moderate power levels and varying bandwidths are available. A full complement of accessories such as springs, a multiband adapter and a quick disconnect device complete the system. Experience the satisfaction that comes with owning the best in the world — the **Hustler** HF Mobile System.

	Model	Band	Power SSB	Bandwidth 2:1 SWR	Weight lbs
RM-10	Standard	10 m	400 W	150-250 KHz	0.41
RM-11	Standard	11 m	400 W	150-250 KHz	0.41
RM-12	Standard	12 m	400 W	90-120 KHz	0.41
RM-15	Standard	15 m	400 W	100-150 KHz	0.42
RM-17	Standard	17 m	400 W	120-150 KHz	0.44
RM-20	Standard	20 m	400 W	80-100 KHz	0.46
RM-30	Standard	30 m	400 W	50-60 KHz	0.84
RM-40	Standard	40 m	400 W	40-50 KHz	0.84
RM-60	Standard	60 m	400 W	40-50 KHz	0.84
RM-75	Standard	75 m	400 W	25-30 KHz	1.05
RM-80	Standard	80 m	400 W	25-30 KHz	1.05
RM-10S	Super	10 m	1 kW	250-400 KHz	1.00
RM-11S	Super	11 m	1 kW	250-400 KHz	1.00
RM-15S	Super	15 m	1 kW	150-200 KHz	1.20
RM-20S	Super	20 m	1 kW	100-150 KHz	1.25
RM-40S	Super	40 m	1 kW	50-80 KHz	1.80
RM-75S	Super	75 m	1 kW	50-60 KHz	2.10
RM-80S	Super	80 m	1 kW	50-60 KHz	2.10



## Mobile HF Antennas Hustler Masts

### MO-1

Mobile mast 54" length, for bumper, fender or hitch mounting. Folds over at 15" above base. Made of highest quality heat treated Stainless steel and aluminum parts. 3/8" x 24 threaded

### MO-2

Mobile mast, 54" length, for bumper, fender or hitch mounting. Folds over at 27" above base. 3/8" X 24 threaded

### MO-3

Mobile mast, 54" length, for bumper, fender or hitch mounting. solid aluminum with white vinyl coating. Does not fold over. 3/8" X 24 threaded

### MO-4

Mobile mast 22" length, trunk or deck mounting. Three retuning tip rods included. 3/8" X 24 threaded

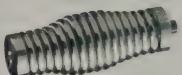
## Professional Chrome Series C-32

Chrome plated 1 1/2" ball mount. Furnished complete with rubber pad, steel backup plate, all mounting hardware and hex key.



### C-30

Chrome plated 4" spring. Copper braided center conductor to prevent detuning. Accepts 3/8" x 24 antennas



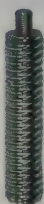
### C-29

Stainless steel 4" spring. Copper braided center conductor to prevent detuning. Accepts 3/8" x 24 antennas



## Resonator Spring RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3" spring absorbs shock when the antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8" x 24 threads, female on one end, and male on the other. Copper braided center conductor to prevent detuning.



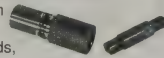
## Magnet Mount MBM "Super" Magnet

- 95 lbs. Pull strength
- Powerful 5 inch diameter magnet
- 8 pole magnet
- 16 feet RG 58/U coax with PL-259 connector.
- 3/8" x 24 female threads
- Recommended for antennas up to 48".



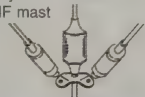
## Quick Disconnect QD-2

100% Stainless Steel. Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly assures freedom against ice and dirt jam up. Accommodates small, medium and large mobile antennas. Equipped with 3/8" x 24 threads, female on one end and male on the other.



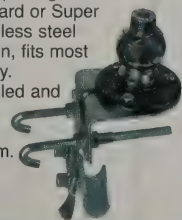
### VP-1

Automatic bandswitching using any three Hustler HF resonators. Adapts any Hustler HF mast to tri-band operation. No additional tuning necessary.



## Bumper Mount BM-1

Design is rugged for supporting Hustler antennas with the Standard or Super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and a bumper strap clamp at the bottom.



## Professional Stainless Steel Series

### SSM-1

Heavy-duty mount with 4" stainless steel spring with copper braided center conductor to prevent detuning. 180 degree adjustable 2" diameter stainless steel ball. Accepts 3/8" x 24 antennas

### SSM-2

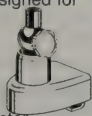
Heavy-duty 2" diameter stainless steel ball mount. 180 degree adjustable. Accepts 3/8" x 24 antennas.

### SSM-3

Heavy-duty stainless steel 4" spring with 3/8" x 24 coupling stud. Copper braided center conductor to prevent detuning.



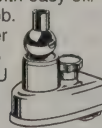
**HLM** Trunk lip mount designed for hatch and slanted back vehicles. 180 degree 1" diameter ball, which accepts 3/8 x 24 antennas. RG58/U coax with PL-259 connector.



**TLM** Trunk lip mount, which accepts 3/8 x 24 antennas. RG58/U coax with PL-259 connector.



**HOT** Trunk lip mount with easy off/on by using thumb knob. 180 degree 1" diameter ball, which accepts 3/8 x 24 antennas. RG58/U coax with PL-259 connector.



**RVM** Recreational vehicle mount with heavy duty bracket. Easy antenna removal or lay down with thumb knob. 1" ball that accepts 3/8 x 24 antennas. RG58/U coax with PL-259 connector.



## 2M/70CM Dual Band Series Antennas

Radial/Larsen dual band antennas provide excellent performance for simultaneous use of VHF and UHF amateur frequencies. Each Radial/Larsen dual band antenna is factory preset to guarantee optimum performance with no tuning required.

### NMO-2/70-SH .....\$40.99

Freq: 144-148/440-450 MHz  
Gain: Unity  
Power: 100 Watts  
Type: VHF: Center Loaded 1/4  
UHF: Center Loaded 3/4  
Base: NMOUHFBASEB w/spring  
Height: 17"  
Whip: WNMO2/70SH

Lower profile amateur 2m/70cm dual band antenna with spring for NMO mounts.

### NMO-2/70B (black) .....\$65.99

Freq: 144-148/440-450 MHz  
Gain: 2.4/4dB  
Power: 100 Watts  
Type: VHF: 5/8 Wave  
UHF: Collinear  
Base: NMO2/70BCO  
Height: 33.5"  
Whip: W2/70B

Amateur 2m/70cm dual band antenna for NMO mounts. Available in chrome (below).

### NMO-2/70C (chrome) .....\$60.99

Freq: 144-148/440-450 MHz  
Gain: Unity  
Power: 100 Watts  
Type: VHF: 5/8 Wave  
UHF: Collinear  
Base: NMO2/70BCO  
Height: 36.75"  
Whip: W2/70C

Amateur 2m/70cm dual band antenna for NMO mounts. Available in black (above).

### MM-2/70PL .....\$50.99

Freq: 144-148/440-450 MHz  
Gain: Unity  
Power: 100 Watts  
Type: VHF: Center Loaded 1/4  
UHF: Center Loaded 3/4  
Base: 3" Round Mag Mount  
Height: 17"  
Whip: WNMO2/70B

Complete 2m/70cm magnetic mounting antenna with 12' of RG58A/U coax.

### NMOQ-2/70-B (black) .....\$36.99

Freq: 144-148/440-450 MHz  
Gain: Unity  
Power: 100 Watts  
Type: VHF: Center Loaded 1/4  
UHF: Center Loaded 3/4  
Base: NMOUHFBASEB  
Height: 18"  
Whip: WNMOQ2/70B

## Kulglass Series High Performance Glass Mount Antennas

Radial/Larsen's Kulglass™ (KG) series uses a patented low impedance design and advanced materials to produce the world's best on-glass antenna. The KG uses advanced resin polymer plastic to completely enclose the circuit board or loading coil for mechanical durability and weather resistance. 3M's best adhesive tape, plus Radial/Larsen's unique bonding enhancer ensure the best possible grip to the glass.

### KG-2/70-CX-PL .....\$116.99

Freq: 144-148/442-448 MHz  
Gain: 2.4/4.5dB\*  
Power: 50 Watts  
Type: VHF: 1/2 Wave  
UHF: Collinear  
Base: KG2/700/S  
Height: 32.5"

\*Ground plane required for gain

Glass mount dual band antenna for 2m/70cm amateur radio frequencies.

### KG-144-UD-PL .....\$83.99

Freq: 144-160 MHz  
Gain: 2.4dB  
Power: 100 Watts  
Type: 1/2 Wave  
Base: KG1440/S  
Conn: PL-259  
Height: 48"  
Whip: WKG144

Complete KG glass mount antenna.

### KG-220-UD-PL .....\$83.99

Freq: 220-225 MHz  
Gain: 2.4dB  
Power: 100 Watts  
Type: 1/2 Wave  
Base: KG2200/S  
Conn: PL-259  
Height: 26.5"  
Whip: WKG220

Complete KG glass mount antenna.

### KG-440-UD-PL .....\$71.99

Freq: 440-460 MHz  
Gain: 2.4dB  
Power: 100 Watts  
Type: 1/2 Wave  
Base: KG4400/S  
Conn: PL-259  
Height: 15"  
Whip: WKG440

Complete KG UHF glass mount antenna with coax and connector.

## Tri-Band Scanner Antenna

### NMO-150450800 .....\$29.99

Freq: 150-165/450-470/806-940 MHz  
Gain: 2.14 dBi  
Type: Tri-Band Scanner Only  
Mount: NMO  
Height: 16.5"

## Radial/Larsen Exclusive Kulduckie Portable Series

Superior transmit range and tough mechanical durability are the hallmark of Radial/Larsen portables. All center cores are made of brass or copper plated steel to maximize RF emission. Fully soldered connections and silver-plated components improve electrical efficiency. Double spring BNC's also reduce wear on the mount. Other styles available.

### KD4-146-HQ (2m) .....\$25.99

Freq: 144-148 MHz  
Gain: Unity  
Power: 25 Watts  
Type: 1/4 Wave Helical  
Conn: BNC  
Height: 8"

### KD-14-2M-HW .....\$38.99

Freq: 144-148 MHz  
Gain: Unity  
Power: 25 Watts  
Type: 1/2 Wave Telescoping  
Conn: BNC  
Height: 8.5 to 42"  
Whip: WKD142MHW

### KD4-2/70 .....\$36.99

Freq: 144-148/442-448 MHz  
Gain: Unity  
Power: 25 Watts  
Type: VHF: Loaded 1/4 Wave  
UHF: 1/4 Wave  
Conn: BNC  
Height: 8"

Impedance matching transformer provides high Q and deeper resonance.



# Hear The Difference

## Industry's Best NMO Mobile Antennas

Radiall/Larsen's own version of the standard 3/4" Motorola TAD/TAE type mount uses advanced design, materials and construction to provide a premium mount. For demanding outdoor applications, the chemical resistant NMO series is housed in a resin polymer plastic shell which is completely molded around the nickel plated brass whip stud to eliminate moisture damage. Our superseal gasket also greatly reduces water intrusion under the base.

### NMO-27C (chrome) .....\$33.99

Freq: 27-31 MHz  
Gain: Unity  
Power: 200 Watts  
Type: Loaded 1/4 Wave  
Base: NMO27BCO  
Height: 53"  
Whip: W490

### NMOQ-SPEC .....\$13.99

Freq: 136-512 MHz  
Gain: Unity  
Power: 200 Watts  
Type: 1/4 Wave  
Height: 21"

### NMO-150C (chrome) .....\$30.99

### NMO-150B (black) .....\$33.99

Freq: 144-174 MHz  
Gain: 3dBd  
Power: 200 Watts  
Type: 5/8 Wave  
Base: NMO150BCO  
Height: 51.75"  
Whip: W490

### NMO-220C (chrome) .....\$30.99

### NMO-220B (black) .....\$36.99

Freq: 220-225 MHz  
Gain: Unity  
Power: 200 Watts  
Type: 5/8 Wave  
Base: NMO220BCO  
Height: 34.5"  
Whip: W400

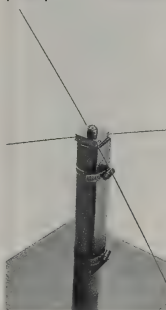
### NMO-440C (chrome) .....\$29.99

### NMO-440B (black) .....\$35.99

Freq: 440-460 MHz  
Gain: 4.5dBd  
Power: 200 Watts  
Type: 5/8 over 1/2 Wave  
Base: NMOUHFBASEB  
Height: 33"  
Whip: W154

## Base Station Antennas

Radiall/Larsen manufactures a variety of small base station for directional and omni-directional applications. Each base station antenna is designed with premium materials to withstand the most demanding weather conditions. All base station antennas come with mounting hardware to attach to a pole up to 2" in diameter.



### BSA-K .....\$53.99

Freq: 144-512 MHz  
VSWR: 1.5:1 or less  
Power: 200 Watts  
Conn: UHF Female  
Whip: 51-3/4"

Complete base station kit for designing a base station unit from 144-512 MHz. Comes with mounting hardware (antenna is extra). Works with NMO and UHF mount antennas.

## Mobile GPS Antenna

### GPS-NM002 .....\$79.99

Freq: 1575.4 MHz  
Gain: 5 dBic/28 ± 2 dB (LNA)  
Voltage: 5 VDC  
Type: GPS NMO mount  
Height: 1.3" high x 2.9" diameter

## Mounts

Larsen has a full line of permanent and temporary mounts to solve nearly every installation problem. Each mount is manufactured of the highest quality materials, including premium coax.

### NMO-K .....\$15.99

Motorola style roof mount

Size: 3/4"  
Coax: 17' RG-58A/U  
Conn: PL-259



### NMO-MM .....\$32.99

Motorola style magnetic mount

Size: 3-1/2" x 3"  
Rectangle  
Coax: 12' RG-58A/U  
Conn: 58FCP  
Pull Strength: 90 lbs.



### NMO-TLP .....\$29.99

Motorola style trunk lip bracket, black

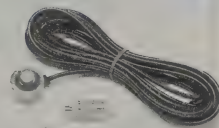
Size: 1-3/4" x 1-3/4"  
Coax: 17' RG-58A/U  
Conn: PL-259



### PO-K .....\$30.99

SO-239 female type roof mount

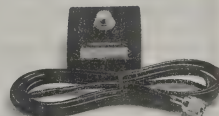
Size: 3/4" hole  
Coax: 17' RG-58A/U  
Conn: PL-259



### PO-MM .....\$36.99

SO-239 female type magnetic mount

Size: 3-1/2" x 3"  
Rectangle  
Coax: 17' RG-58A/U  
Conn: 58FCP  
Pull Strength: 90 lbs.



### TMB-34 (chrome) \$5.99

### TMB-34B (black) \$7.99

Trunk mounting bracket for NMO antenna.

Size: 1-5/8" x 1-5/8"  
Mount: NMO



## Parts and Accessories

### W-490 .....\$9.99

Chrome .100 tapered replacement whip for 144 MHz. (49")

### W-490B .....\$12.99

Black .100 tapered replacement whip for 144 MHz. (49")

### W-2/70B .....\$27.99

Black .100 dia. replacement whip for NMO 2/70B (approx. 31")

## RADIALL/LARSEN antenna technologies

Radiall/Larsen Antenna Technologies

3611 NE 112th Avenue

Vancouver, WA 98682

360 944-7551, Fax: 360 944-7556

Email: info@radiallarsen.com

Web: www.radiallarsen.com

## More RADIALL/LARSEN

See listing in Price Guide

# ISOTRON BILAL COMPANY

Antennas for Very Limited Space  
Simple & Effective...

2002 - Our 22nd Year!



See product reviews 73 Magazine: Oct. '84, Sept. '85, Mar. '86, Nov. '94, Apr. '96. CQ magazine: Dec. '88. WR: Mar. '91.  
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137 Manchester Dr. Florissant, CO 80816 • 719/687/0650

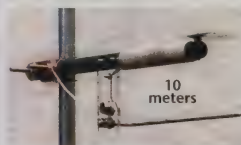
- Solve restricted space problems.
- Easy, quick, and simple installation.
- Handles up to 1,000 watts PEP.
- Excellent portable operation - emergencies, RV's, field day, motels, Maritime operation.
- Not dependent on a grounding system for performance.
- Unobtrusive appearance, making a very discreet looking installation.
- Very Stealth.
- Excellent Low Noise reception and transmitting quality performance is not compromised by its compact design.
- Tunes and performs without radials.
- Multi-band operation on one feedline with back to back mounting. Any other combination of three bands may be substituted on special order.
- Durable construction, can be used in extreme weather conditions, will not bend in high winds. No motors or mechanical tuning devices to fail.



Common Specifications: 1000W PEP power rating (300W, CW, AM, FM, RTTY) • 50-75Ω coax feed • Omni-directional radiation pattern • Bandwidth shown is within 2:1 SWR but may vary with environment • Stainless steel fasteners • Zinc plated u-bolts • Tempered aluminum components • Cast acrylic and PVC insulators • THHN #14 solid copper coils • 85 mph wind rating

## Individual Specifications:

Model	160C	80	40	20	15	10	6
Band	160 meters	80 meters	40 meters	20 meters	15 meters	10 meters	6 meters
Freq. (MHz)	1.8-2.0	3.5-4.0	7.0-7.3	14-14.35	21-21.450	28-30	50-54
hxwxw (in.)	114 x16x15	32x16x15	22x16x15	21x8x4	21x1½x4	16x1½x4	16½x2x4
BW	100kHz	110kHz	250kHz	350kHz	450kHz	1MHz	1.25MHz
Windload (sq. ft.)	1.697	1.37	1.0	0.23	0.23	0.16	0.13
Weight	7 lbs.	6 lbs.	4 lbs	2 lbs	2.0 lbs	1.5 lbs	1.5 lbs.
PRICE	\$173.99	\$98.99	\$88.99	\$78.99	\$78.99	\$78.99	\$78.99



## Multiband Models (top & right)

**80/40 COMBO** Same as individual model specifications above. Operate 80/40 meters with one feed line 32"x16"x30", 2.37 sq. ft. 10 lbs. .... **\$177.99**

**20/15/10 COMB** Covers same as individual model specifications above. Operates 20/15/10 meters with just one feed line ..... **\$198.99**

**SPECIAL ORDER!** - You can make up your own combination. Substitute 30m for 40m in the 80/40 Combo or 17m for 15m in the 20/15/10 Combo. MARS, CAP and Commercial models available.

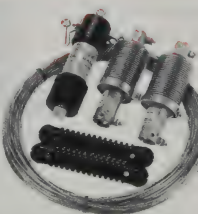
## DIAMOND ANTENNA

**D-130J** Super Discone Copied by many, equaled by none. Professional quality. Ultra-wide-band omnidirectional - receives amateur, air traffic control, police, fire and other utilities from 25-1300MHz. Can transmit 80-1300MHz (50MHz with adjustment). Rustfree stainless steel employed in major component parts. Ideal antenna for scanners and receivers. Use standard RG213 or RG8X coax. Mast mounting U-bolts included. 67" h, 2.2 lbs. .... **\$89.99**



## UNADILLA

**W2AU/W2VS 5 Band Antenna Kit** Resonant on 40 and 80M. SWR on 10, 15 and 20M will be higher (2:1 to 4:1) and a transmatch may be necessary to operate these bands. Includes 40M traps, W2AU balun, end insulators and 120 feet of #14 stranded antenna wire. Rated 2KW PEP, 110 feet long. .... **\$85.99**



## Van Gorden Engineering



## DIPOLE ANTENNAS

Complete with Hi-Q 1:1 balun, #14 stranded copper antenna wire, plastic insulators, and 100 ft. of nylon rope. Rated for full legal power. May be used in an inverted-V configuration.

<b>D-80</b> 80m, 130'	<b>\$32.99</b>
<b>D-40</b> 40m, 66'	<b>29.99</b>
<b>D-20</b> 20m, 33'	<b>28.99</b>
<b>D-15</b> 15m, 22'	<b>27.99</b>
<b>D-10</b> 10m, 16'	<b>26.99</b>

**Shortened Dipoles** Construction is the same, and includes traps as shown above.

<b>SD-80</b> 80m, 90'	<b>\$36.99</b>
<b>SD-40</b> 40m, 45'	<b>34.99</b>

**ALL BANDER** All Bander Dipole Covers 160 to 10M using an antenna tuner with balanced output. Full 135 ft. long (or less, as an inverted V or sloper). Trim to fit small lots. Assembled, with #14 gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. 2KW PEP. .... **\$29.99**

**SHORTY** All Bander As above, but with loading coils to shorten the length to 70' overall... **\$44.99**



## MULTIBAND ANTENNAS

**G5RV** Covers 3.5-30MHz, plus 1.8MHz as a Marconi-type antenna with a tuner. Consists of a 102 ft. flat top with a 31' long section of 300Ω (450Ω for models below) KW twinlead, a transformer/coupler and 70 ft. of RG-8X coax and connector. 2KW PEP, assembled ..... **\$50.99**

**G5RV JR** 7-30MHz, 52', 17' twinlead ..... **24.99**

**G5RV-E** 3.5-30MHz, 102', 31' twinlead ..... **28.99**

**G5RV-M** 1.8-30MHz, 204', 65' twinlead .... **50.99**

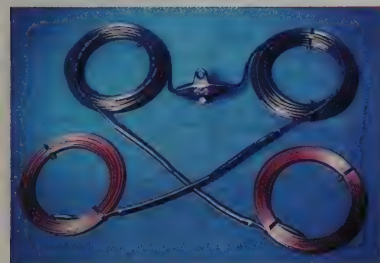
## ANTENNA SUPERMARKET



**EAVES TWIN** The Eavesdropper Shortwave Broadcast Receiving Antenna A 42 ft. long center-fed dipole with 8 automatic bandswitching trap circuits which electrically separate the antenna segments - just tune your receiver to the desired band. The Eavesdropper covers the 11, 13, 16, 19, 21, 25, 31, 41, 49, 60, 75 and 90 meter bands. Includes The Zap-Trapper® gas-tube lightning arrestor for receiver protection and 50 ft. of 450-pound test support rope. Completely assembled, ready to use. With 100' of 72Ω twin lead ..... **\$89.99**

**EAVES SO239** With weather-proofed SO-239 coaxial center connector, coax not included. **\$89.99**





**Double Bazooka Half Wave Antennas** extremely broad banded that they can operate efficiently across the entire Ham band with little change to SWR. IAC's design results in quiet, broadband operation with 98% efficiency and a 50Ω SO-239 balanced feedpoint without a balun. Mount horizontally or inverted V. Handles full legal limit.

**160M Bazooka** 1.8MHz (160M), 248' ..... **\$214.99**

**80M Bazooka** 3.5MHz (75-80M), 121'... **\$150.99**

**40M Bazooka** 7MHz (40M), 64' ..... **\$126.99**

**Double Bazooka Shorty Antennas** utilize a unique High Q coil design coupled with the already proven Double Bazooka characteristics providing maximum radiation efficiency and broad bandwidth. Mount as inverted V. Handles full legal limit power. Operates efficiently on other bands with tuner.

**160M BAZ SHORT** (160M), 168' ..... **\$229.99**

**80M BAZ SHORT** (75-80M), 84' ..... **\$159.99**

**40M BAZ SHORT** (40M), 40' ..... **\$129.99**

**Half Sloper Antennas** are a quarter wavelength long and look like half of the Double Bazooka (pictured). Mounts from a tower or vertical metal support. Feeds directly with 50Ω coax utilizing SO-239 connection. Handle full legal power. Operate efficiently on other bands with tuner.

**160M-S** 160M, 127 ft ..... **\$140.99**

**80M-S** 75-80M, 67 ft., operates 80-10m with antenna tuner ..... **\$115.99**

## hy-gain

**HF Vertical Antenna** Effective counterpoise replaces radials and ground system

- Automatic bandswitching with a single coax cable feed. Each band is individually tunable. Extra wide VSWR bandwidth. End fed with broadband matching unit. DC grounded. • Low angle of radiation - 17° for exciting DX. • 2.5 sq. ft. wind surface area • Small area required for mounting easily on roofs, decks and patios.
- Handles full legal limit 1500W key down for two minutes • Aircraft quality aluminum tubing, stainless steel hardware; 80 mph wind survival.

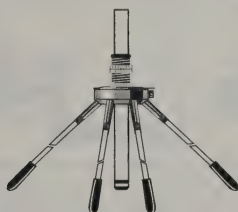
**AV-620** 20-6M 6-Band No traps, coils or radials. 22.5' tall, 10.5 lbs ..... **\$269.99**

**AV-640** 40-6M 8-Band Uses 1/4-wave stubs on 6 thru 17M and end loading and capacity hats on 15 thru 40M. 25.5' tall, 17.5 lbs ..... **\$359.99**

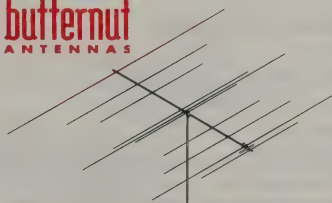
**A-99** 10M Base Antenna with Twin Ring Adjust-A-Match Tuning Voltage-fed, half wave variable, mutual transfer inductance tuned antenna. It's economical and easy to use! The SOLARCON sealed base unit is tuned with external inductance rings. Impedance remains constant over the tuning range. Simple Tuning! Raising the tuning rings raises the frequency and lowering the rings lowers the resonant frequency.

Rugged, three-piece, white fiberglass construction with triple-plated brass fittings. It's easy to assemble and install. The optional GPK-1 ground plane radial kit makes it perform even better!

- Full 10 meter band coverage • 3 dBi gain
- 2kW power limit • Low angle of radiation for DX • DC grounded • Mounts on 1.5 in. mast • Uses 52Ω coaxial cable with SO-239 connector • 17 ft. 8 in. length..... **\$64.99**



**GPK-1** Groundplane Kit Use with the A-99 for 30% more power gain and lower angle of radiation. Collar and 4 fiberglass radials ..... **\$39.99**



**SKYHAWK 3X10** Triband Yagi A design breakthrough. 3-band, 10-element, 20/15/10M, rust free ..... **Drop Ship \$999.99**

**HF-2V** 80/40 Vertical 32' ..... **\$269.99**

**HF-6VX** 6-Band Vertical 26' ..... **\$349.99**

**HF-9VX** 9-Band Vertical 26' ..... **\$399.99**



www.aesham.com

For radios that operate HF/6M/2M/70cm

**UHV-6** Designed for 6 and 2M and 70cm basic operation without tuning. Additional coverage for 40, 15 and 10 meters may be added by installing the supplied coils for those bands. Coils for 20, 17, and 80M are optional. Choose either one, two, or three coils and add one to the top, and one or two to the side, in any combination. Automatic bandswitching. Each HF element tunes independently without affecting VHF/UHF. Only 7 ft. 2 in. tall with the 40M coil attached to the top. A unique fold-over hinge pivots approximately 5 inches from the bottom for garaging, entering parking structures, etc.

Installs on any standard SO-239 (PO) type mount; no special brackets are needed. Several duplexers/ triplexers are available for all multiband radios. - see the index under duplexers for selection..... **\$149.99**

**L-3.5** 80M coil ..... **\$4.99**

**L-14** 20M coil ..... **\$9.99**

**L-18** 17M coil ..... **\$9.99**

**CF-530** 1.3-90/125-470MHz dplx. **\$69.99**

**CF-706A** 1.3-56/75-470MHz duplr **\$69.99**

**CA-52HB4** Wide Band 6M Beam HB9CV, 4-element • 50MHz band frequency • 50Ω impedance • <1.5:1 (50-54 MHz) VSWR • 10.4dBi • Half power angle <54° • Over 19dB F/B ratio • 400W maximum power, SSB • Boom length, 10.5 ft. • 7.3 ft. turning radius • SO-239 connector • 1.0 to 2.5 in. mast diameter • 4 lbs, 14 oz ..... **\$119.99**



**HO Loops** At times, when using highly directional VHF or UHF antennas, there are signals you cannot hear off the sides and back. The addition of an HO-Loop to your set-up will enable you to be aware of those stations you may be missing. Great for round tables, nets and monitoring for band openings.

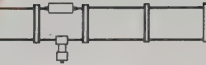
HO-Loops are horizontally polarized and omnidirectional, ideal for mobile or base operation with contacts up to 200 miles not uncommon. Typical gain is 4.0+ dBi, and power rated at 800W or 1.5kW stacked. They're easily adjustable and have a wide bandwidth that ensures high performance regardless of the weather.

**6M-HO-LOOP** 50-50.3MHz, 29.5" sq ..... **\$113.99**

**22M-HO-LOOP** 144-144.5MHz 11.25" sq ..... **\$9.99**

**22M-HO-LOOP** 220-224MHz, 7.75" sq ..... **\$9.99**

**432-HO-LOOP** 430-436MHz, 4.4" sq ..... **\$9.99**



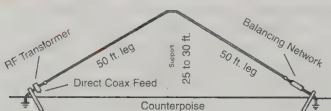
## BROADBAND ANTENNAS

• MARS, ARES, RACES, CAP, Amateur – One antenna does all “out of band” frequencies! Single antenna solution for regular amateurs • Low cost – Compared to multiband antennas. Utilize one antenna instead of several. No need for an antenna tuner or antenna switches. • Performance – Not limited to conventional ham bands. Operate on any frequency in the antenna’s bandwidth, and have VSWR of 2:1 or better. • Low Noise – Capture weak signals in receive mode. Better performance than any vertical and very reliable. • Simple to Use – Work any frequency you want with low SWR without measurements and tuning.

## BROADBAND FOLDED DIPOLES

These antennas operate all HF frequencies continuously within their design range without an antenna tuner, plus 6M with a tuner. Install as flat top, inverted vee, or sloper. Constructed of #14 stranded copperweld or stainless steel wire. Unbalanced 50Ω input with SO-239 connector. Shipped completely assembled. Handles 2 kW PEP.

<b>BWD-20</b> 14-30, 20 ft., copperweld .....	<b>\$179.99</b>
<b>BWD-45</b> 7-30, 45 ft., copperweld .....	<b>\$189.99</b>
<b>BWD-65</b> 4-30, 65 ft., copperweld .....	<b>\$199.99</b>
<b>BWD-90</b> 1.8-30, 90 ft., copperweld .....	<b>\$209.99</b>
<b>BWDS-65</b> 4-30, 65 ft., stainless .....	<b>\$319.99</b>
<b>BWDS-90</b> 1.8-30, 90 ft., stainless .....	<b>\$339.99</b>
<b>FDMK</b> Folded Dipole 3-pole mtg. kit .....	<b>\$39.99</b>

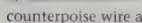


## BROADBAND END-FED VEE ANTENNA

Unique design, covers 1.8-30MHz continuous, with a VSWR of <2:1 without an antenna tuner, 6M with a tuner. Installs with termination at both ends by ground stakes (not included), and the center about 25' above the ground. Omnidirectional, high angle radiation at lower frequencies. Increased angle from 5-15MHz, above 15MHz more directional in the line of the antenna wire. In limited space, wire may be shortened without greatly affecting the VSWR, but lowering radiation efficiency. Excellent EMI rejection and is extra quiet to capture weak signals. Handles 2kW PEP. Fully assembled, uses #14 stranded copperweld or stainless steel. 110' long, 7 lbs.

<b>AC-1.8-30</b> Copperweld wire .....	<b>\$209.99</b>
<b>ACS-1.8-30</b> Stainless steel wire .....	<b>\$344.99</b>

**AP-10A** Window/Portable 300W PEP Antenna A 10-40M base loaded antenna with 7-30 MHz continuous coverage, plus 2 and 6M. Tunes a low VSWR by tapping a fly lead up or down the coil and adjusting the supplied counterpoise wire. A quick and dependable antenna system when larger antennas cannot be used. Supplied with mounting bracket/clamp, counterpoise wire and 10 feet of coax ..... **\$89.99** |



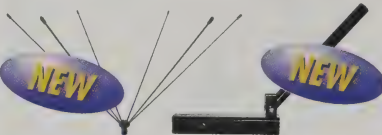
## High Sierra Antennas

**NEW**

### MOTORIZED ANTENNA

**PLATINUM PACK** Continuous coverage, Motor Driven HF Antenna Package The HS-1800/PRO antenna provides continuous tuning from 3.5 to 30MHz with a typical VSWR of less than 1.5:1 across the entire tuning range. Removing the supplied 6-foot whip provides a tuning range from 6.9 to 60MHz. The “best antenna” for general mobile use because of its light weight, high performance and ability to cover the entire HF spectrum. Also a great idea for antenna-restricted QTHs, ARES/RACES and more!

Complete package, ready to install, includes the HS-1800/PRO (right) – black powder coat finish with black stainless-steel whip, black universal mounting bracket, quick-disconnect manual control box, RF filter assembly and installation kit (20 feet of control cable, wire ties, (2) PL-259's, 3 feet of ground strap and connector sealing material) ..... **\$495** |



**HS-120** Capacity Hat (left) Six stainless steel rods with aluminum tips inserted into a brass hub. Hat diameter is 1.5 feet. Installed on the HS-1800 it's roughly equal to adding 6 more feet of whip.. **\$50** |

**HS-202CL** (right) 2" x 2" receiver “lay back” adapter for the universal mounting bracket.. **\$100** |

**HS-214CL** (right) 1.25" x 1.25" receiver “lay back” adapter for the universal mounting bracket.. **\$100** |



**PROSTAR® 1000 VHF/UHF/FM Antennas** Features die-cut impedance correlator that allows close spacing of antenna elements. Manufactured from high tensile aluminum for a strong, compact antenna that will better withstand strong winds and ice loading. Protected with polymer finish.

<b>PR-7010</b> Metropolitan 22 active elements (9 VHF, 13 UHF) • 66.5' boom .....	<b>\$39.99</b>
<b>PR-7032</b> Far Suburban 33 active elements (13 VHF, 20 UHF) • 103.25' boom .....	<b>\$64.99</b>
<b>PR-7042</b> Fringe (top) 43 active elements (17 VHF, 26 UHF) • 149.75' boom .....	<b>\$99.99</b>



**Shakespeare**



### VHF MARINE ANTENNAS

**4187** Ratchet Mount (above) Stainless steel. 4-way ratchet design with handle for deck or bulkhead mounting. Standard 1"-14 male threads ..... **\$36.99** |

**396-1** Center-fed 1/2 Wave Coaxial Sleeve Antenna Basic 3dB antenna designed to reduce signal fading when working in rough seas. Widely used by the Coast Guard. 5MHz bandwidth, 3dB gain, 50W • White Shakespeare fiberglass • Brass and copper elements • Deluxe chrome-plated brass ferrule • One section • 5 ft. length, 15' RG-58 cable with PL-259. Use 4187 ratchet mount ..... **\$59.99** |

**420** Skipper™ Center-fed 1/2 Wave Coaxial Sleeve Antenna Economical, and a good basic 3dB antenna for steady, day-to-day cruising in calm to moderate seas. Includes a polycarbonate lift/lay deck mount, leveling plate and hardware. 5MHz bandwidth, 3dB gain, 50W • White Shakespeare fiberglass • Brass and copper elements • Polycarbonate ferrule • One section • 5 ft. length, 15' RG-58 cable with PL-259 ..... **\$59.99** |

**5101** Centennial™ End-fed Antenna with Matching Stub High-end features in an 8' antenna with a brass element and a smooth, high gloss, polyurethane finish that won't turn yellow in the sun. 5MHz bandwidth, 6dB gain, 50W • One section • Brass and copper elements • Chrome-plated brass ferrule with standard 1" x 14 thread • 8 ft. length • Includes 15 ft. RG-58 cable and a PL-259 coaxial connector. Use with 4187 ratchet mount ..... **\$49.99** |

**5206-C** End-fed Antenna with Matching Stub Economical, lightweight and self-supporting antenna for good communications where range is not the predominant factor. 3MHz bandwidth, 6dB gain, 50W • White Shakespeare fiberglass • Chrome-plated brass ferrule • One section • DC grounded • 8' length, 15' RG-58 cable with PL-259. Use with 4187 ratchet mount ..... **\$39.99** |

**5202** Collinear-phased 5/8 Wave Elements A rugged, professional quality antenna featuring a heavier duty radome and tough brass and copper construction for maximum efficiency and extra range. 3MHz bandwidth, 6dB gain, 50W • White Shakespeare fiberglass • Chrome-plated brass ferrule • One section • DC grounded • 8' length, 20' RG-58 cable with PL-259. Use with 4187 ratchet mount ..... **\$69.99** |

**Used & Demo**  
Equipment lists  
Updated regularly on the web.  
Check them out and order **On-line**





# ATOC Technologies

## ANTENNAS & MOUNTS



### VHF / UHF Antennas

#### Glass Mounted Antennas Dual Band and VHF

Each glass mount antenna includes instructions and mounting package. Replacement whips, base and remount kits are available. (NOTES: Some newer automobiles are equipped with "passivated glass" which does not permit on-glass antennas to work properly). Please check your owner's manual or your automobile dealer.

##### ATA270 2m / 440 MHz Antenna

Gain 2.6 dB at 2m and 4.0 dB at 440 MHz over 1/4 wave. Max power 50 Watts. 14' RG-58 cable with PL-259.

##### ATA144 2m Antenna

Gain 2.5 dB at 2m over 1/4 wave. Max power 50 Watts. 14' RG-58 cable with PL-259.

#### Stake Truck Bed & Magnetic Mounts from Iron Horse

Designed for the serious amateur on-the-go, these heavy-duty stainless steel mounts feature an expandable rubber base that locks mount when tightened for secure fit. Great for HF sticks and 102" stainless steel whip antennas. Both fit most pickup truck brands and models

##### IHSB-2

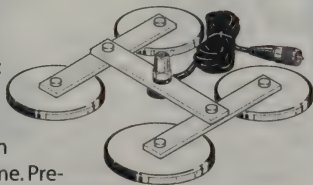
locates the antenna on either side of the bed rail.

##### IHSB-4

locates the antenna directly over the truck bed rail.

##### IH4501 & IH4501-SO Quadruple Magnet Mount

4 x 5" MuleHorse Magnetic Mount Kit features four 5" magnets properly spaced on a heavy duty aluminum frame. Pre-wired with 17' RG-58 and PL-259. Triple chrome plated. **IH4501** accepts 3/8" x 24 thread antennas. **IH4501-SO** accepts SO - 239 antennas.



### HF Antennas

#### Iron Horse Series

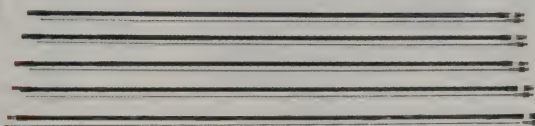


## IronHorse

Enjoy great HF mobile performance with these rugged, easily tuned mono-band antennas. Made in the USA, Iron horse antennas are designed for maximum efficiency, low SWR and broad bandwidth. Each has 3/8 x 24 threads and is rated for 500 watts. Order the IHKD35 five antenna quick disconnect mounting kit to make changing bands a quick and easy operation. Just push, turn, and go!

MODEL	DESCRIPTION	BANDWIDTH (KHz)
IHF75	75 m HF Stick	36
IHF40	40 m HF Stick	60
IHF30	30 m HF Stick	50
IHF20	20 m HF Stick	150
IHF17	17 m HF Stick	175
IHF15	15 m HF Stick	200
IHF12	12 m HF Stick	300
IHF10	10 m HF Stick	500
IHF6	6 m HF Stick	1000

**Model IHF55** is a set of five HF antennas all in one vinyl bag. The set includes 10 - 15 - 20 - 40 - 75 m antennas.



##### Model IHKD35

is a five pack quick disconnect mount kit.

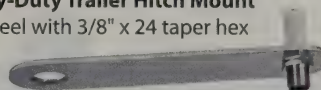


##### Model AN38

is an adaptor for NMO to a 3/8" x 24 thread antenna.

##### IHTH-1 Heavy-Duty Trailer Hitch Mount

All stainless steel with 3/8" x 24 taper hex w/ chrome-plated brass SO239 connector.



# pro.am<sup>®</sup> ANTENNAS & ACCESSORIES

## 160-6 Meters Mobile

### PHF Series Antennas

Single band whips consisting of a black fiberglass lower section with integrated coil and an adjustable and removable stainless steel whip, except for the PHF-160. These time-proven HF antennas are especially designed for maximum efficiency, low VSWR and broad bandwidth. They are power rated for 250 Watts P.E.P. and built to withstand considerable use. Standard 3/8" x 24 thread base. Assembled length on all models is 96 in. (the PHF-6 is 58 in.). The model **DAK** Dual Adapter Mount (\$13.99) accepts two antennas to make up a single band vertical or horizontal dipole which is perfect for limited space or portable operation.

Model	Band	Bandwidth	Price
<b>PHF-160</b>	160M	12 kHz	<b>\$89.99</b>
<b>PHF-75</b>	75M	36 kHz	<b>\$29.99</b>
<b>PHF-40</b>	40M	60 kHz	<b>\$23.99</b>
<b>PHF-30</b>	30M	100 kHz	<b>\$23.99</b>
<b>PHF-20</b>	20M	150 kHz	<b>\$23.99</b>
<b>PHF-17</b>	17M	175 kHz	<b>\$23.99</b>
<b>PHF-15</b>	15M	200 kHz	<b>\$23.99</b>
<b>PHF-12</b>	12M	300 kHz	<b>\$23.99</b>
<b>PHF-10</b>	10M	500 kHz	<b>\$23.99</b>
<b>PHF-6</b>	6M	1000 kHz	<b>\$23.99</b>

## 2 Meters

### PHB-144 \$29.99

5/8 wave, 3dB gain over 1/4 wave, covers 144-174 MHz. Tuned, low loss coil with 1-1/8" threads to match Pro-am and 3/4 in. hole Motorola TAD/TAE mounts. Rated 100W, whip length 49 in.

### CX-144 \$17.99

5/8 wave, 3 dB gain over 1/4 wave. Heavy duty matching coil with standard 3/8" x 24 chrome-plated base. Rated at 100W, length 49 in.

## Dual Band 2M & 70CM +

### MO144-440 \$21.99

A dual band antenna to over it all! 19" Covers 2M/70cm plus works great for all band scanners 25 MHz-1.3 GHz. Stainless steel whip. Mount with 1-1/8" threads match 3/4" hole Pro-am and Motorola TAD/TAE mounts. SWR less than 2:1. Gain: unity on 2m and 2.1dB over a 1/4 wave on 70 cm.

## Thru Glass 2 Meter

**GM-144 \$29.99**  
Mounts on windshield and operates thru-the-glass to a tuning unit mounted on the inside. Features a 27-1/2 in. copper plated whip with black finish, 14 ft. of RG-58 coax and PL-259 connector. Gain is 2.5 dB over a 1/4 wave. VSWR is 1.5:1 through the band. Rated for 50W. Tunable.

*Some autos have "passivated glass" which does not permit antennas to work properly. Check your manual or dealer.*



GM-144

### TGS \$39.99

On-glass 30-1200 MHz receive antenna

## Thru Glass 2M/70CM

**GM-270 \$59.99**  
Dual Band 2M/70cm thru-the-glass antenna featuring a 26-1/2 in. copper plated whip with black finish, 14 ft. of RG-58 coax and PL-259 connector. Gain is 2.6 dB over a 1/4 wave at 2m and 4.0 dB over 1/4 wave at 70 cm. VSWR is <2:1 through the bands. Rated for 50W. Tunable.

GM-270



## Mounts

### 105AD \$6.99

Mount Assembly with chrome-plated brass hex and nickel-plated SO-239. For Plug to plug connections.

### 105HD \$3.99

Chrome Mount Assembly that mounts by bolting through a 1/2 in. hole. Chrome-plated brass

### 103S \$24.99

Quick Disconnect mounting kit. One 3/8" x 24 base and five twist-lock connectors

### 120 \$7.99

Radio Hump Mount. Saw-tooth design grips without damage to carpet. Adjustable, Steel, baked black.

**100ADT \$9.99**  
Extra heavy duty aluminum 3-way mirror mount. 3/8" x 24 mount and SO-239 connection.

**100ADN \$10.99**  
Extra heavy-duty aluminum double groove mirror mount with 3/8" x 24 mount and SO-239 connection.

**SS-100MOT \$23.99**  
Stainless steel 3-way mirror mount with Motorola-style mount. Includes 10 ft. of cable to a PL-259

**DAK \$13.99**  
Dual adapter mount with one lug and one SO-239. Accepts two PHF or other 3/8" x 24 mobile antennas for vertical and horizontal dipole configuration.

## Utility

### PAQA \$8.99

A unity gain stainless steel UHF/VHF whip that covers 136 to 866 MHz with cutting required. Nickel/chrome plated brass base with 1-1/8" threads to match Pro-am and 3/4" hole Motorola TAD/TAE mounts. Includes cutting chart.

PAQA



### PAT-2 \$19.99

A chrome low profile trunk-lip mount including 17 ft. of RG-58 cable with PL-250 connector. Model **PAT-2B** is BLACK.

### PAM \$24.99

A 3-3/4 in. diameter low profile magnet Motorola mount pre-wired with 12 ft. of RG-58 cable to a PL-259 connector. Model **PAMB** is BLACK.

### 301 \$16.99

4 in. dia. with 3/8" x 24 mount.

### 401 \$19.99

5 in. dia. with 3/8" x 24 mount.

### MM-270B \$19.99

Dual Band 2M/70cm MICRO-MAG™ with a 1-1/8 in. black ABS rare earth magnetic base and stainless steel 20 in. whip. A 2M 1/4-wave and 70 cm 5/8-wave with unity gain and 1.5:1 VSWR throughout the bands. Rated for 50W on 2m and 25W on 70 cm. Has 9 ft. of RG-174 cable to a BNC connector.

MM-270B



### PAS \$19.99

Surface Motorola mount with 17 ft. of RG58 cable with PL-259 connector. Installs in 3/4" hole in roof, fender or cowl mount.



PASMO

**PAS38** Same as PAS but with PL-259 mount **\$9.99**

### PASMO \$7.99

**PASMO** Mount only, less cable and connector

## Magnet Mount Antennas

### VAA-002B \$23.99

2 meter 1/4 wave antenna with a 3-1/4 in. magnetic base. 19 in. 17-7ph stainless steel whip and 12 ft. of cable with PL-259 connector. Can also be trimmed for 220 or 450 MHz operation. Black finish.

### VAA-002BBN \$27.99

Same, but with BNC antenna connector.

VAA-002B / VAA-002BBN



PHB-144

CX-144

AB5

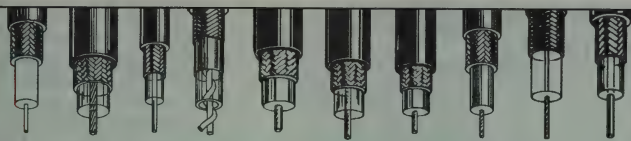
## Multi-Band Mobile

### AB-5 \$119.99

Consists of a 4 ft. aluminum mast and tri-top adapter with resonators included for 10, 15, 20, 40 and 75 meters. Also operates on 6 meters. Mast fits any standard 3/8 x 24 thread mobile mount. The 10, 15, and 20 meter resonators work without extra tuning. The interchangeable 40 and 75 meter resonators are easily tuned with their tunable tips.



**Belden**



## COAXIAL CABLE

See Belden in the Price Guide

Model	Type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vol. factor	Loss/100' 100 MHz
<b>8216</b>	RG-174 Sub-miniature	.11	26 AWG bare copper coat steel	Solid polyethylene	90% tinned copper braid	Black PVC	50Ω	66%	8.4 dB
<b>8219</b>	RG-58A/U	.195	20 AWG stranded bare copper	Foam polyethylene	96% tinned copper braid	Black PVC	53.5Ω	73%	4.5 dB
<b>8240</b>	RG-58/U	.195	20 AWG solid bare copper	Solid polyethylene	95% tinned copper braid	Black PVC	51.5Ω	66%	3.8 dB
<b>8259</b>	RG-58A/U	.193	20 AWG stranded tinned copper	Solid polyethylene	95% tinned copper braid	Black PVC	50Ω	66%	5.4 dB
<b>8262</b>	RG-58C/U non-contaminating	.195	20 AWG stranded tinned copper	Solid polyethylene	95% tinned copper braid	Black, non-contaminating PVC	50Ω	66%	5.4 dB
<b>9258</b>	RG-8X Mini-8	.242	16 AWG stranded bare copper	Foam polyethylene	95% bare copper braid	Black PVC	50	82%	3.1 dB
<b>8214</b>	RG-8/U	.403	11 AWG stranded bare copper	Foam polyethylene	97% bare copper braid	Black PVC	50Ω	78%	1.7 dB
<b>8237</b>	RG-8/U	.405	13 AWG stranded bare copper	Solid polyethylene	97% bare copper braid	Black PVC	52Ω	66%	1.9 dB
<b>8267</b>	RG-213/U non-contaminating	.405	13 AWG stranded bare copper	Solid polyethylene	97% bare copper braid	Black, non-contaminating PCV	50Ω	66%	2.1 dB
<b>9913</b>	Low loss semi-flexible RG-8/U	.405	10 AWG solid bare copper	Semi-solid polyethylene	100% bonded foil plus 90% tinned copper, braid	Black PVC	50Ω	84%	1.3 dB
<b>9913F7</b>	Low loss flexible RG-8/U	.405	10 AWG stranded bare copper	Gas-injected foam polyethylene	100% bonded foil plus 90% tinned copper braid	Black Belflex®	50Ω	84%	1.5 dB
<b>8241</b>	RG-59/U	.242	23 AWG solid bare copper	Solid polyethylene	95% bare copper braid	Black polyethylene	75Ω	66%	3.4 dB
<b>8213</b>	RG-11/U	.405	AWG 14 solid bare copper	Gas-injected foam polyethylene	97% bare copper braid	Black polyethylene	75Ω	84%	1.3 dB
<b>8238</b>	RG-11/U	.405	18 AWG stranded tinned copper	Semi-foam polyethylene	97% bare copper braid	Black PVC	75Ω	66%	2.0 dB

## ROTOR CABLE

**8448** Standard duty, 8 wire. Up to 100 ft. runs. Six #22 and two #18 AWG tinned copper conductors. PVC insulation and PVC jacket.

**9405** Heavy duty, 8 wire. Over 100 ft. runs. Six #18 and two #16 AWG tinned copper conductors. PVC insulation and PVC jacket.

**8484** Standard duty, 4 wire. Four #20 AWG tinned copper conductors. PVC insulation and PVC jacket.

See Belden in the Price Guide

## PREASSEMBLED COAXIAL HOOK-UP CABLES (INSTALLED)

**9354** 50' RG-8/U low-loss foam, PL-259s... **\$49.99**

**9355** 75' RG-8/U low-loss foam, PL-259s.... **69.99**

**9356** 100' RG-8/U low-loss foam, PL-259s.. **79.99**

## ANTENNA & GROUND WIRE

**8000** #14 AWG (7x22) stranded bare copper-covered steel antenna wire.

**8018** #8 AWG (solid) soft annealed aluminum ground wire – multiples of 50 ft.

Connecting you to the World

**CABLE X-PORTS**

## FLAT GROUNDING BRAID

Flat, flexible, and tinned for easy soldering. 1" size primarily used for grounding tower legs to ground rods or central point in a shack. From the central point, use 1/2" size to all equipment separately for best protection.

**2332** 1/2", 10 gauge, rated at 53A ..... per ft. **59¢**

**2332 100** 100 foot roll of above..... **\$52.99**

**235** 1", 7 gauge, rated at 85 amps..... per ft. **99¢**

**235 100** 100 foot roll of above ..... **\$92.99**

**COAX-SEAL**  
The Original Coaxial Seal

**UNV 104** Hand Moldable Plastic for Antenna Component Protection The quick and effective way to seal and protect all types of coaxial fittings, baluns, antenna parts and connectors. Simply wrap it on like regular tape, then mold it to any shape. It adheres tightly to metal, vinyl and polyvinyl coax outer jackets. Stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal just by reforming the same material. Non toxic and non-contaminating roll, 1/2" w x 60" ... **\$3.99**

**MFJ** MFJ ENTERPRISES, INC.

**341S (SO-239)/341M**

(NMO) Permanent

Mobile Hard Mounts

Quality antenna

mounts with 14' of RG-58A/U coaxial cable and attached PL-259 connector. Easily snakes around any vehicle to the obtain the best operating position. Perfect for MFJ *RuffRider*™ or other brands of mobile VHF/UHF antennas..... ea. **\$19.99**



**WINEGARD®**

Clearly the World's Best®



**TV-2900** Weatherproof Transformer 82 channel, matching transformer for indoor or outdoor use. Adapts 75Ω coaxial cable with F-connector to terminals of a 300Ω TV antenna, TV set or coupler. Includes F-connector and boot..... **\$2.99**

**RG-6 75Ω TV Coaxial** Cable with cellular poly dielectric, #20 copperweld center conductor, 100% aluminum foil shield and 40% aluminum braid shield provides low-loss, good conductivity, flexibility and tensile strength. Weather-proof F-connectors installed.

**CX-0625** 25 ft. length..... **\$10.99**

**CX-0650** 50 ft. length..... **15.99**

**CX-0675** 75 ft. length..... **19.99**

**CX-6100** 100 ft. length..... **24.99**

**synthetic textiles, inc.**



**Black Dacron® Polyester Rope** Constructed of strong double braid Dacron® polyester. It's black for UV protection and has excellent resistance to weather, mildew and abrasion. The rope ties and cuts easily and ends seal effectively with the application of a small flame or hot tool.

After a small initial "set" due to tightening of the braid, it has virtually no long term stretch, making it ideal for supporting dipoles, long wires, etc. Also, great for non-resonant guying of masts or towers. When used as an overhead boom support rope for beam antennas, it eliminates a conductive wire from the RF field, which is especially important in VHF/UHF applications.

**100'** 100 ft., 260+ lbs., 3/32" ..... **\$7.99**

**100'** 3/16 100 ft., 770+ lbs., 3/16" ..... **16.99**

**100'** 5/16 100 ft., 1790+ lbs., 5/16" ..... **22.99**

**350'** 350 ft., 770+ lbs., 3/16" ..... **44.99**

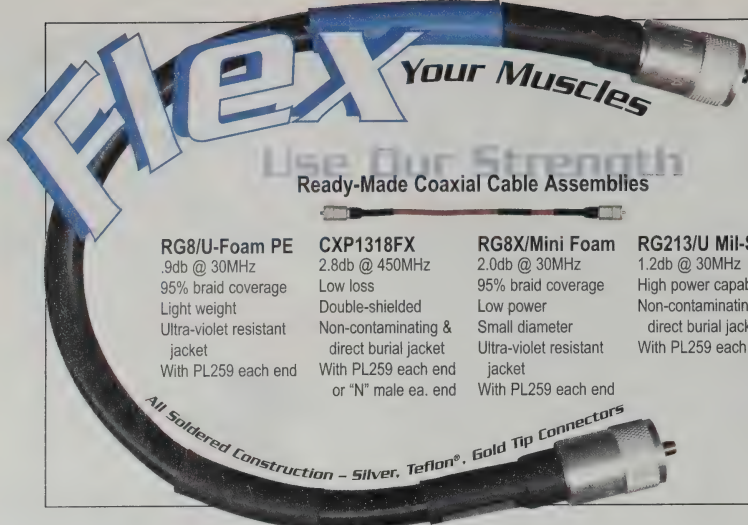
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Email Your Questions to info@aeshom.com

**AES**

**ANTENNA ACCESSORIES**

**131**



## Ready-Made Coaxial Cable Assemblies

**RG8/U-Foam PE**  
9db @ 30MHz  
95% braid coverage  
Light weight  
Ultra-violet resistant  
jacket  
With PL259 each end

**CXP1318FX**  
2.8db @ 450MHz  
Low loss  
Double-shielded  
Non-contaminating &  
direct burial jacket  
With PL259 each end  
or "N" male ea. end

**RG8X/Mini Foam**  
2.0db @ 30MHz  
95% braid coverage  
Low power  
Small diameter  
Ultra-violet resistant  
jacket  
With PL259 each end

**RG213/U Mil-Spec**  
1.2db @ 30MHz  
High power capabilities  
Non-contaminating &  
direct burial jacket  
With PL259 each end

All Soldered Construction - Silver, Teflon®, Gold Tip Connectors

For optimum performance from your communications equipment. These precision USA made and tested assemblies will provide years of great service. Guaranteed to perform to specifications. For excellent cabling results, you can depend on

CABLE X-PERTS, INC.

jake



Made In USA



Connecting you to the World™

**CABLE X-PERTS, INC.**

www.cablexperts.com

See Price Guide for Cable X-perts pricing.

## CASTLE RIDGE PRODUCTS, INC.



**COPPERWELD®** Antenna Wire Forge-welding makes the two metals inseparable! Solid bare copper-over-steel wire - the best for antennas. Very strong, the steel core has very little stretch and long service life. The copper covering provides low RF resistance and solders easily. 12, 14 or 18 gauge.

<b>AN-122</b>	100 ft. #12	\$29.99
<b>AN-123</b>	150 ft. #12	39.99
<b>AN-124</b>	250 ft. #12	59.99
<b>AN-126</b>	500 ft. #12	99.99
<b>AN-128</b>	1000 ft. #12	179.99
<b>AN-142</b>	100 ft. #14	24.99
<b>AN-143</b>	150 ft. #14	29.99
<b>AN-144</b>	250 ft. #14	39.99
<b>AN-146</b>	500 ft. #14	69.99
<b>AN-148</b>	1000 ft. #14	119.99
<b>AN-181</b>	250 ft. #18	17.99
<b>AN-182</b>	500 ft. #18	29.99



## ROTARY COAX CABLE STRIPPERS

For quick, clean prep of coaxial cable without damage. Insert coax, turn clockwise 4 or 5 times.

<b>24-7735P</b>	for RG-58, RG-59, RG-62	\$21.99
<b>24-7736P</b>	for RG-6, RG-59, 8281	21.99
<b>24-7739P</b>	for RG-8, RG-11, RG-213	28.99

**Used & Demo**

Equipment lists

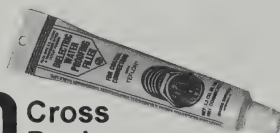
Updated regularly on the web.

Check them out and order **On-line**



**Cross Devices**

**STUF** Dielectric Water-proof Connector Filler Seals out moisture. High purity macroscopic foam that dielectrically simulates the coaxial cable core. Fill coax connectors and tighten. The filler material hydraulically channels into all connector voids and points of moisture entry. Non-hardening, easy to remove. No silicones, or other additives to harm coax cable material ..... (tube) **\$4.99**



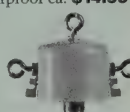
## Van Gorden Engineering

### BALUNS & INSULATORS

**Hi-Q 1:1 or Hi-Q 4:1** Baluns  
For dipoles, yagis, inverted vees and doublets. Provides 1:1 or 4:1 impedance ratio for matching unbalanced coaxial cable to balanced antennas. Covers 3-40MHz with a 1.5KW rating. Reduces feedline radiation for more power into antenna, and reduced TVI/BCI problems. Built-in DC ground reduces static noise and provides some lightning protection. Convenient SO-239 connector and center support eye hook; weatherproof ea. **\$14.99**



**ANTENNA CENTE** Hi-Q Antenna Center Insulator  
Insulator only, no balun. Replaces egg-type center insulator. Small, rugged, lightweight, weatherproof, SO-239 connector, center supporting eye hook ..... **\$6.99**



**ANTENNA END IN** End insulators . pair **\$4.99**  
**DOG BONE** Antenna insulators ..... each **99¢**

### LADDER LINE

<b>450 OHM 100</b>	18 ga. 100' insulated	\$14.99
<b>450 OHM 14 100</b>	14 ga. 100' insulated.	29.99
<b>450 OHM 1000</b>	18 ga. 1000' insulated.	109.99
<b>450 OHM 14 1000</b>	14 ga. 1000' insul..	229.99

### WHITE NYLON ROPE

<b>NR-100</b>	100' roll, antenna guy rope	\$4.99
<b>NR-1000</b>	1000' roll, antenna guy rope	44.99

### N CONNECTOR

**N CONNECTOR** Male connector for Belden 9913 and 8214 coax ..... **\$4.99**

### PREASSEMBLED COAXIAL HOOK-UPS

<b>8X-1.5ST</b>	1.5' RG-8X, silver-tef. PL-259s.	\$7.99
<b>8X-3ST</b>	3' RG-8X w/silver-teflon PL-259s....	8.99
<b>8X-6ST</b>	6' RG-8X w/silver-teflon PL-259s.	10.99
<b>8X-12ST</b>	12' RG-8X, silver-teflon PL-259s.	11.99
<b>8X-25ST</b>	25' RG-8X, silver-teflon PL-259s	15.99
<b>8X-50ST</b>	50' RG-8X, silver-teflon PL-259s	24.99
<b>8X-75ST</b>	75' RG-8X, silver-teflon PL-259s	31.99
<b>8X-100ST</b>	100' RG-8X, silver-tef. PL-259s	37.99
<b>213-25ST</b>	25' RG-213, silver-tef. PL-259s.	25.99
<b>213-50ST</b>	50' RG-213, silver-tef. PL-259s.	38.99
<b>213-75ST</b>	75' RG-213, silver-tef. PL-259s.	54.99
<b>213-100ST</b>	100' RG-213, sil.-tef. PL-259..	72.99





# UNADILLA



MFJ ENTERPRISES, INC.

## ANTENNA TUNERS

### W2AU FERRITE BALUNS

These baluns replaces center insulator and provide a smooth transition from unbalanced coaxial transmission lines to balanced antennas; dipoles, quads and yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced TVI/BCI. DC grounded for lightning protection, center eye hook for support. Usable from 1.8-40MHz, 2KW PEP, SO-239 connector.

- W2AU 1:1** 1.1, 1.8-40MHz ferrite ..... **\$24.99**  
**W2AU 4:1** 1.1, 1.8-40MHz ferrite ..... **24.99**  
**W2AU BEAM** 1.1, Beam balun ..... **24.99**

### W2DU CHOKE BALUNS

High efficiency, transformerless 1:1 baluns. The HF model is the only one available that works on 160 meters! They all handle a VSWR up to 5:1 at the legal power limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies.

- W2DU-HF** 1:1, 1.8-30MHz choke ..... **\$26.99**  
**W2DU-VHF** 1:1, 30-250MHz choke ..... **26.99**  
**W2DU BEAM** 1:1, 40-10m choke ..... **26.99**

### REYCO ANTENNA TRAPS

Add traps to your dipole for multiband operation on two to seven bands. Add the 40M pair (KW-40) and get "perfect dipole" performance on 40 and 80M. Add five pair and work 10, 15, 20, 40, 80 and 160M with low SWR.

**Selecting traps:** List the bands you want to cover, listing the Highest Frequency band first. You will need a pair of traps for each band except the one with the Lowest Frequency.

- KW-10** 10M ..... pair **\$41.99**  
**KW-12** 12M ..... pair **\$41.99**  
**KW-15** 15M ..... pair **\$41.99**  
**KW-17** 17M ..... pair **\$41.99**  
**KW-20** 20M ..... pair **\$41.99**  
**KW-30** 30M ..... pair **\$42.99**  
**KW-40** 40M ..... pair **\$42.99**  
**KW-80CW** 80M CW ..... pair **\$48.99**  
**KW-80F** 80M Phone ..... pair **\$48.99**

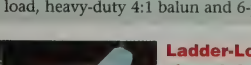
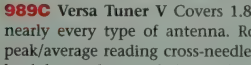
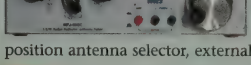
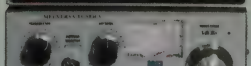
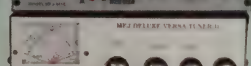


**HA AN-Insulator™ (left)** A strong center dipole insulator with built-in lightning protection. SO-239 connector, 3.5" long x 1.75" dia ..... **\$9.99**

**HE END-Insulator™ (right)** A shatter-proof antenna end insulator. Tough, includes voltage path extenders, positive wire track. Low loss, lightweight and long leakage path. 5.5" long x 1" dia. .... pair **\$6.99**



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**902 Tiny Travel Tuner** Only 4.5" w x 2.25" h x 3"d, but rated for 150W. Tunes nearly any coax-fed or random length wire antenna for 80-10M. Perfect for "take along" rigs like IC-706MKII-G, FT-100D, TS-50S, QRP rigs and others with built-in SWR meter ..... **\$69.99**

**922 VHF/UHF Dual Band Antenna Tuner** Great for HTs, mobiles or amps up to 150W. Using the included tool, adjust your antenna system for a low SWR on VHF, 136-175MHz and UHF, 420-460MHz. Meter reads both SWR and power in 60/150W ranges. 4" x 2" x 1.25" carry it in your car, while camping, etc. .... **\$79.99**

**945E Mobile Tuner** Covers 1.8-30MHz plus 6M, and rated at 300W PEP. Matches coaxial cable only. Extends mobile antenna bandwidth and eliminates having to stop and adjust the whip length when making frequency changes. Lighted cross-needle SWR bridge and power meter with 50/300 and 5/30W ranges. 8" w x 2" h x 6" d ..... **\$99.99**

**941E Versa Tuner II** Covers 1.8-30MHz and rated at 300W PEP. *Matches everything!* - coaxial fed dipoles, vees, whips, verticals, beams, random wires and balanced lines, has a built-in 4:1 balun. Lighted cross-needle SWR/power meter with 300/50W and 30/5W ranges. Convenient 8-position antenna selector for 2 coax lines, random wire or balanced line or an external dummy load. 10.625" w x 2.875" h x 7" d ..... **\$109.99**

**934 Antenna Tuner/Artificial Ground** Makes a random wire an effective antenna. Combines the best features of MFJ's 941E and 931 into one unit. A full-featured 1.8-30MHz, 300W antenna tuner with cross-needle meter and ground matching knob that lets you switch in inductance to bring an attached random length wire to a low impedance current point, forming an artificial ground. 10.625" w x 3.5" h x 7" d ..... **\$169.99**

**948** All the features of the 941E without the dummy load. Has larger lighted peak reading cross-needle SWR/power meter ..... **\$119.99**

**949E Deluxe Versa Tuner II** Same power, tuning and switching capability as the 941E with a larger, lighted peak or average reading cross-needle SWR/wattmeter. *PreTune™* allows off-air tune-up into a built-in 50Ω dummy load. 10.625" w x 2.875" h x 7" d ..... **\$139.99**

**969 Deluxe Versa Tuner II** Covers 6-160M and rated at 300W. Features a roller inductor coil with a spinner knob and 3-digit turns counter. Lighted peak/average reading cross-needle SWR/wattmeter with 30/300W ranges. Tunes coaxial cable, random wire or balanced feedline, has a built-in 4:1 balun. QRM-Free *PreTune™* allows off-air tune-up into a built-in 50Ω 300W dummy load. Convenient 8-position antenna selector switch. 10.5" w x 3.875" h x 9.5" d ..... **\$189.99**

**962D Versa Tuner III** Covers 1.8-30MHz and rated at 1.5KW PEP. Matches coaxial fed antennas, random or balanced line. Has a built-in 4:1 balun. Lighted peak/average cross-needle SWR/wattmeter with 200/2000W ranges. 6-position selector for 2 coax lines (direct or thru), random and balanced lines. 10.5" w x 3.875" h x 15" d ..... **\$249.99**

**986 Differential-T Tuner™** Covers 1.8-30MHz, rated at 3KW PEP. Uses a broadband T-network with roller inductor and differential capacitor. Tunes most antennas using only two knobs. Lighted peak or average reading cross-needle SWR/wattmeter with 200/50W and 2000/500W ranges. Inductor spinner knob, 3-digit turns counter, 6-position antenna selector, external dummy load switch, 4:1 balun. 10.75" w x 4.5" h x 15" d ..... **\$299.99**

**989C Versa Tuner V** Covers 1.8-30MHz, rated at 1.5KW PEP with heavy-duty components. Matches nearly every type of antenna. Roller inductor with spinner knob and 3-digit turns counter. Lighted peak/average reading cross-needle SWR/wattmeter with 200/2000W ranges. Built-in 50Ω 300W dummy load, heavy-duty 4:1 balun and 6-position antenna selector switch. 10.75" w x 4.5" h x 15" d ..... **\$319.99**



**Ladder-Loc® Center Insulator & Support** Provides convenient attachment of 450Ω ladderline to various dipoles. Minimizes feedline flexing at the antenna feed-point and ensures a long lasting, trouble-free installation. A top attachment point is provided for attaching a center support rope. UV stabilized for long life ..... **\$12.99**

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## ANTENNA ACCESSORIES

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Email Your Questions to [info@aesham.com](mailto:info@aesham.com)





## ANTENNA TUNERS

**VC-300M** Mobile Tuner Compact and lightweight for base or mobile use. Tunes verticals, dipoles, inverted Vs, beams and mobile whips fed by coaxial cable. Covers 1.8–30MHz at 300W continuous power. The dual-movement cross-needle meter simultaneously monitors RF power output and SWR. 7.25" w x 3.5" h x 8.75" d, 2.5 lbs **\$99.99**



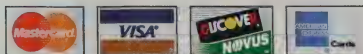
**VC-300DLP** Antenna Tuner A quality, economical tuner. Covers 1.8–30MHz at 300W continuous power capability from 3.5–30MHz and 150W on 1.8 MHz. Built-in dummy load, dual-movement cross-needle peak or average reading meter. Compatible with most antennas – coax-fed, balanced or single wire. Built-in 4:1 balun and 6-position antenna switch. 10.25" w x 9.5" d x 3.5" h, 3.5 lbs.. **\$149.99**



**VC-300D** Antenna Tuner Same functions and specifications as the VC-300DLP above, but has the additional capability to show a peak power indication by using an instantaneous responding digital bargraph meter display. A level and delay control has been added to calibrate the display to the meter, and to vary the delay response..... **\$179.99**



**HFT-1500** Antenna Tuner Rated for 1500W from 1.8–30MHz; 1000W (2KW PEP) on 160 and 10M. Features a cranked continuous roller indicator with a numerical turns counter and vernier tuning on the antenna and input capacitors. The dual-movement cross-needle meter shows average forward and reverse power and SWR while a 21-segment bargraph indicates the peak power. A true RF directional coupler sensor is used for the wattmeter circuitry. Includes a built-in 4:1 balun for balanced antenna systems and six-position antenna selector switch. 5.5" h x 12.5" w x 12" d, 10 lbs..... **\$399.99**



We accept I.M.P.A.C.® Government Credit Cards



**AT-1000** High Power Automatic Antenna Tuner 1000 Watt Microprocessor-controlled "L" network works by automatically analyzing SWR and adjusting discrete components at speeds faster than can be accomplished manually. Dual cross reading meter simultaneously monitors forward/reverse power and SWR. • Tuning time: 0.1–6 seconds, 3.0 average • Requires 11 to 15VDC @ 1A • 1.8–54MHz, tunes 6 to 800Ω (10:1 SWR) • 20–1000W SSB, 750W CW, 500W digital (6M limit 100W) • For dipoles, verticals, vees, beams and coax-fed antennas • 13" x 9" x 3", 6 lbs ..... **\$549.99**



**AT-11MP** Desktop Automatic Antenna Tuner The World's most popular Desktop Autotuner! Switched "L" network tuning for unparalleled tuning ranges. Lite cross-needle meter displays forward and reflected power and SWR. Tunes most coax-fed antennas to 15:1 or less. • 5–150W continuous • 1.8 to 30MHz continuous • Optional interfaces for Icom, Alinco, Yaesu FT-100/897 and Kenwood TS-50 • Optional Balun for tuning wire antennas • Requires 11–18 VDC @ 15–500mA (250mA average) • 9.5" x 8.25" x 2.5", 4 lbs ..... **\$219.99**



**AT-897** Automatic Antenna Tuner Specialized bolt-on tuner for Yaesu FT-897, a direct replacement for the FC-30. Power consumption is ZERO when not tuning, perfect for battery operation. A second CAT port allows simultaneous use of computer control and tuner. Quickly tunes coax-fed antennas and lowers SWR from 10:1 to 1.5 or less. • Tuning time: 0.5–8 seconds, 4 average • Powered directly from FT-897 CAT port • Microprocessor controlled • 1.8–54MHz, tunes 6 to 800Ω • For dipoles, verticals, vees, beams and others • Optional external balun allows tuning of random length, long wire, and others • 10.5" x 3.25" x 1.5", 2 lbs..... **\$199.99**

**RBA-1** 4:1 Balun Uses include matching twin-lead or ladder line to coax cable, and interface between long wires or end fed wires to coax cable. Coax side is a SO-239 connector. The wire side is two, 5-way binding posts. Weather resistant enclosure with gaskets on all connectors. • 1.8–30MHz • 200W • 2" x 4.5" x 1.5", >6 oz.... **\$30.99**



**Z-100** Automatic Antenna Tuner Power consumption ZERO when not tuning, perfect for portable operation. Uses LDG's high efficiency, microprocessor-controlled, switched "L" network to work with dipoles, verticals, inverted vees and others. Use external balun for long wires or ladder line-feds. Optional interfaces for DC power and control from most Icom, Alinco and Kenwood radios. • Latching relays hold tune • 0.1–125W • LEDs for SWR and tuning state • Tuning time: 0.5–6 seconds, 3 average • Requires 7–16VDC at 300mA • 1.8–54MHz, tunes 6–800Ω • 5.5" x 5.25" x 1.5", 14 oz..... **\$149.99**



**Z-11** QRP Automatic Antenna Tuner Perfect for QRP radios. Designed with regard to reduction in size and power consumption. A high-efficiency, microprocessor-controlled, switched "L" network designed to work with dipoles, verticals, vees, beams or other coax-fed antennas. Latching relays allow the Z-11 to be powered off once tuned. • 1.8–30MHz • 0.1–30W continuous (60W peak) • Tunes 6 to 800Ω • Tuning time: 0.1 to 3 seconds (1.5 average) • Optional Yaesu FT-817 interface • Requires 11–18 VDC @ 10–190mA (75mA average) • 5" x 6.5" x 1.3", 15 oz..... **\$169.99**



**RT-11** Remote Mounting Automatic Antenna Tuner Best choice for mobile, marine, and remote applications. Weather resistant, ABS plastic enclosure with flanges. Latching relays hold last tuned position, even if power is removed. • 1.8–54MHz • 0.1–125W • Tuning time: 0.1 to 3 seconds, 1.5 average • Optional interfaces for Icom, Alinco, Yaesu FT-100/897 and Kenwood TS-50S • Tunes coax-fed antennas, optional balun for wire antennas • Requires 11–18VDC @ 10–200mA (75mA average) • 8.5" x 5.5" x 3", 2.5 lbs ..... **\$199.99**

**K-OTT** Kenwood One Touch Tune Plugs into any Kenwood that supports AT-300 tuner. Provides control signals/power for LDG tuners. Activate tuning sequence or bypass tuner from radio panel. • Microprocessor interface between radio and tuner • 6-pin Molex, DB9 connector and power jack • Requires 12VDC @ 14mA (from radio) • 6" radio and tuner connections, 8" adapter • 1.5" x 3" x .75", 1 lb..... **\$59.99**





## ANTENNA TUNER

**ATR-30 True Legal Limit™ Antenna Tuner**  
Covers 1.8–30MHz, including MARS and WARC. Designed for sustained RF output over 1500W CW and 3000W SSB, also 160M. Uses High-Q, high-current, edge-wound, arc-free roller inductor with heavy duty 500pf capacitor in T-match network. Matches most antennas using either coax or balanced feedlines. Cross-needle, peak-reading SWR/wattmeter, 3000/300W ranges, measures peak/average forward/reflected power plus VSWR, illum. Includes 3-core choke balun, 6-position antenna switch and 6:1 vernier reduction drives, turns counter. Requires 12VDC or internal 9V. **\$549.99**

## REMOTE CONTROLLED ANTENNA SWITCHES

**RCS-4** Select up to 4 different HF antennas by supplying control voltages thru the coax without the need for a separate control line. The weatherproof switch box can be tower, mast or wall mounted. Uses 3 heavy duty 10A contact relays on a fiberglass circuit board 5.25" d x 7" w x 3" h. Safe, 14VDC control. Indoor control console located at operating position. 6" d x 6" w x 2.5" h. 120VAC. Rated 1.8–30MHz, 2KW. **\$129.99**

**RCS-8V** Independently or simultaneously select up to 5 different antennas using one coaxial feedline and 8-wire control cable. Internal wiring allows grounding or floating unused terminals as required. Rated at 5KW below 30MHz, and 1KW up to 150MHz. **\$139.99**

**RCS-8VN** Same as RCS-8V but with N-type female connectors. **\$149.99**

**RCS-10** Select up to eight HF antennas using one feed line and a single four conductor control line (not supplied). Long life sealed relays with 16A current rating. Up to 100MHz with low VSWR. Over 5KW below 30MHz (matched). **\$149.99**

## Palomar Engineers

**PT-340 Tuner**  
Eliminate QRM, overheated final tubes & devices by adjusting the station antenna tuner without transmitting. Installs permanently between rig and receiver. Just turn on, and listen to the noise output in a receiver, then adjust the station tuner controls for a dip in the noise (a null). Covers 1.7–30MHz. Uses 9V battery. 6" w x 5" h x 3" d. **\$99.99**

## ICOM

**AH-2B Antenna Element** Provides 7 through 50MHz mobile operation when used with the AH-4 antenna tuner. Includes hardware for mounting to a tow bar; 8.2 ft. antenna. **\$299.99**

**AH-4 Automatic Antenna Tuner** Fully automatic – covers 3.5MHz–54MHz with a 23' or longer wire antenna, or 7–54MHz with optional AH-2B element. It measures 6.7" w x 2.7" h x 9" d for easy installation in a variety of locations. Weather-resistant construction, using rubber gasket seals, enables operation in all conditions. Handles 120W PEP, requires only 5–15W for tuning. Designed for use with Icom HF transceivers. Just push the [TUNER] switch and the AH-4 auto adjusts to the minimum SWR in less than 2.5 seconds. Up to 45 memories store settings to provide 1-second retuning. Supplied with mounting kit, 16' control and coaxial cables, PL-259s. Requires 13.8 VDC. **\$259.99**

## DAIWA

**CS-201 2-Position Coaxial Switch** A high quality coaxial switch with excellent high frequency RF characteristics due to cavity and heavy diecast metal construction. Frequency range up to 600MHz with less than 0.12 VSWR, less than 0.2dB insertion loss and 60dB isolation between terminals. Rated at 2.5 KW PEP or 1KW CW. Auto grounding of unused terminals, SO-239 connectors. **\$26.99**



**PT-3 Preamplifier** Covers 2–54MHz and useable with either a receiver or transceiver. A tunable low noise dual-gate FET circuit provides >20dB gain, low N.F. and improved spurious and image rejection. An RF sensed switch with variable delay automatically bypasses to antenna on transmit. Second receiver or antenna capability. 12V DC, or use P-12T AC adapter (\$9.99). 2.5" h x 8.75" w x 6.5" d. **\$124.99**



**TPA Tunable Preamp/Active Antenna** Use as a preamplifier to improve receiver gain, or as an indoor active antenna. Covers 0.22–30MHz in 5 bands. A dual-gate FET device provides an excellent N.F. and >20 dB gain. As a preamplifier, the input matches most antennas; long wire, 300Ω and random lengths. When no external antenna is available, the preamplifier's built-in 30 in. collapsible whip gives great results. Uses 9V battery or P-9T AC adapter (\$9.99). 1.5" h x 8" w x 6.5" d. **\$76.99**

## MFJ

MFJ ENTERPRISES, INC.

## ANTENNA MOUNTS

**310 HT Antenna Window Mount**  
Clip Your HT rubber duck antenna radiates poorly inside your car due to the shielding effect of the roof, doors, etc. Detach the duck from your HT and install on this handy BNC window mount clip. It holds your antenna securely on the outside of your car's window where it can radiate freely. Quick and easy to install and remove. Comes with 10' of flexible mini-coaxial cable. **\$14.99**

**340 Mirror or Luggage Mount** For mounting VHF/UHF and medium-size HF antennas on mirror, luggage rack or spare tire carrier of truck, van, RV or SUV. **\$34.99**

**345 Trunk/Hatchback Lip Mount** Mounts on any lip on your vehicle. An extra-wide 4-inch lip and large reinforcing tabs on each side safely distributes the load. Mounts at any angle and allows at any desired angle. **\$34.99**



## COAXIAL SWITCHES

**1700B Antenna and Transceiver Switch** Select up to 6 antennas and 6 rigs in any combination. Leave in line to operate with any combination 50 or 75Ω. Handles 2KW PEP or 1KW CW from 1.8–30 MHz. Unused positions are auto grounded for lightning protection. 10" w x 3" h x 1.5" d. **\$79.99**



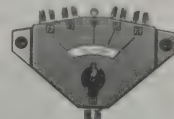
**1701 Antenna Switch** Six positions, for 50–75Ω systems. Rated for 2KW PEP or 1KW CW from 1.8–30MHz. Unused positions are grounded for lightning protection. 10" w x 3" h x 1.5" d. **\$49.99**

**1702C Antenna Switch** 2 positions + center ground. 50Ω, rated to 500MHz with <0.2dB loss, 2.5kW PEP or 1kW CW. >60dB isolation @ 300MHz or >50dB @ 450MHz. Unused terminal auto grounds for lightning protection. **\$24.99**

**1702CN** Lowest loss on UHF. Uses Type N connectors which are good up to 1.1GHz. **\$34.99**

**1704 Antenna Switch** 4 positions + center ground. 50Ω, rated to 500MHz with <0.2dB loss, 2.5kW PEP, 1kW CW, >50 dB isolation @ 500MHz. Includes replaceable lightning protection. **\$64.99**

**1704N** with Type N's. **\$74.99**



## DUPLEXERS

Type	S0239 PL259/PL259	S0239 PL259/Nmale	S0239 S0239/S0239	S0239 PL259/PL259	S0239 PL259/Nmale	Nfemale PL259/Nmale	PL259 S0239/S0239
Leads	No	No	No	Yes	Yes	No	Yes
2m/440	Comet CF4160K Diamond MX72D MFJ 916	Comet CF4160I	Comet CF4160J	Comet CF416A Comet CF530 Diamond MX72H	Comet CF416B Diamond MX72N Yaesu AD3	Comet CF416C Comet CF416W	
2m/220	Diamond MX214D			Comet CF142			
HF/6 to 440				Comet CF360A			Comet CF360B
HF to 6/2m				Comet CF706A Diamond MX62M			

## TRIPLEXERS

Type	Leads	HF/6/2/440/1200	HF/6/2/440	2/220/440
Nfemale PL259/PL259/Nmale	No	Comet CFX4310C		
S0239 PL259/PL259/PL259	Yes	Diamond MX2000	Comet CFX514	Comet CFX324A Diamond MX324
S0239 PL259/PL259/PL259	No		Comet CFX5140	Comet CFX324B Diamond MX324D
Nfemale PL259/PL259/Nmale	Yes	Diamond MX3000		
S0239 PL259/PL259/Nmale	Yes		Comet CFX514N	
S0239 S0239/S0239/S0239	No		Comet CFX514J	



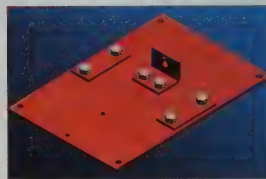
For duplexer/triplexer prices, see the Price Guide under each respective manufacturer.



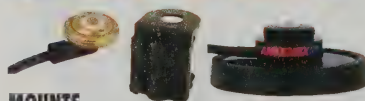
## GROUNDING ACCESSORIES

**GBIS18114AE** 1/8" Copper Entrance Ground Bar Kit Installs at shack entrance, making a short connection to the ground system. Holds up to five PolyPhaser IS-50-type lightning protectors. Insulated stand-off brackets allow attaching and insulating of ground bar from mounting surface. Two HD terminal lugs and hardware included. Attach grounding wires from 1/0 stranded to #6 solid..... **\$27.99**

**GEL3AE** Pkg. of 5 HD terminal lugs ..... **\$15.99**



## ANTENEX



## MOUNTS

**MB-8PST** Permanent Brass Hole Mount (NMO) Quality brass alloy, silver-soldered ground lug. Mounts in 3/4" hole. Comes with 17' RG-58A/U stranded cable, Teflon® PL-259 connector. **\$15.99**

**GB-8PSTI** NMO Magnetic Mount For temporary vehicle installs. Strong (90 lbs. pull), protective mylar sole prevents scratches. With 12' RG-58A/U cable and Teflon® PL-259 connector ..... **\$29.99**

**LBMB-9034** "L" Bracket for Mirror Mount Strong, extruded aluminum. Accepts various 3/4" hole mounts. Black (plain pictured)..... **\$10.99**

**VTPM** Plate Mount 1" thick NMO plate mount (UHF barrel)..... **\$15.99**



**931** Artificial Ground Unit Eliminates problems caused by inadequate grounding when using random length wire antennas. It resonates an additional length of wire to act as a tuned counterpoise. It results in easier tuning, improved efficiency, a better radiation pattern and reduced TVI/RFI. Covers 1.8 to 30MHz, RF ammeter tuning indicator. 7.5" w x 3.5" h x 7" d. Not for coax fed antennas ..... **\$89.99**

**270** Lightning Surge Protector Safeguard ham gear from damage due to static charges & lightning induced surges. Replaceable ultra-fast gas discharge tube safely shunts up to 5000 amps of peak impulse current to an independent ground. Rated to 400W PEP, usable up to 1000MHz..... **\$29.99**



## Kleinhuys

North America, Inc.

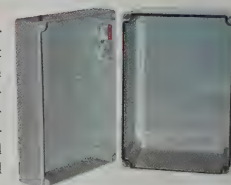


**1309** Isolated Ground Bar Perfect for grounding data patch panel racks and marine applications. Provides additional panel, sub-panel or control panel grounding. Lay-in style. Adapts easily for design/build applications, mounts to back panel or wall surface. Corrosion resistant, nickel-plated, copper clamping rail. Includes locking protective hinged cover. UL listed, CSA approved. 600V maximum. Accepts 8 to 12 (AWG) stranded or solid copper wire 7.5" w x 1.75" h ..... **\$14.99**

## GP1868.78AE

1/8 in. Copper Single Point Ground Panel Kit Provides single-point grounding for two transceiver lines and rotor control cable. Installs at tower base or on outside wall. Sized to fit inside a NEMA-4X style box for weather proofing. Tapped holes and hardware provided for mounting a PolyPhaser IC-RCT rotor control protector and up to two IS-50 series coaxial protectors. Sandwich plates and hardware included ..... **\$54.99**

**GBX976AE** NEMA 4X Waterproof Enclosure (right) Accepts GP1868.78AE ground panel **\$89.99**



**GBIS18148AE** 1/8" Copper Station Ground Bar Kit Installs at back of operating desk. Grounds individual components to a common point preventing multiple ground paths and daisy-chains. Accepts a heavy ground conductor to be routed to station ground or entrance ground bar. Includes two heavy 12 in. straps for equipment and two light duty 1/4 in. straps for accessories, plus an extra 1/4" strap and lugs for added assemblies ..... **\$64.99**



We accept I.M.P.A.C.® Government Credit Cards

## DC SALES

**TENNA HITCH** A heat treated, high strength aluminum bracket with insulated 3/8" x 24 mounting stud. Installs under the ball of any Class-I or II hitch. Handles the largest mobile antennas, and does not interfere with trailer towing capability. No holes to drill. All hardware is supplied ..... **\$38.99**



**Secure**  
www.aesham.com



# PolyPhaser<sup>®</sup> CORPORATION

The primary rule for protecting ham radio equipment against lightning damage is connection of all elements to a single, low impedance, ground system within the hamshack. This includes antenna, antenna support (pole, tower, etc.), and all station protectors (antenna, power, telephone, rotor, etc.).

## BROADBAND COAXIAL PROTECTORS

Hermetically-sealed gas tubes and additional components assuring surge voltages and currents that are formed differentially on coaxial cable are prevented from being shared by valuable equipment. DC blocked for maximum protection. • Low loss • Multi-strike capability with low strike throughput energy • Aluminum enclosure • Wide frequency range, low VSWR • Works on all equipment • Silver-center, TFE, UHF connectors • Silver shell and gold pin Type-N



### Flange Mount (left)

**IS-50UX-C0** 1.5-400MHz • HF 2kW, VHF 375W, UHF 125W • UHF connector..... **\$61.99**  
**IS-50UX-C1** 50-700MHz • VHF 375W, UHF 125W • UHF connector..... **\$61.99**  
**IS-50NX-C2** 125-1000MHz • VHF 375W, UHF 125W/50W (low/high) • Type-N conn ..... **\$61.99**

### Bulkhead Mount (middle)

**IS-B50LU-C0** 1.5-400MHz • HF 2kW, VHF 375W, UHF 125W • UHF connector..... **\$64.99**  
**IS-B50LU-C1** 50-700MHz • VHF 375W, UHF 125W • UHF connector..... **\$64.99**  
**IS-B50LN-C2** 125-1000MHz • VHF 375W, UHF 125W/50W (low/high) • Type-N conn ..... **\$64.99**

### Isolated Port Bulkhead Mounts (right)

DC block for the center conductor and blocks the shield's surge energy from the equipment chassis.  
**IS-IE50LN-C1** 50-700MHz • VHF 375W, UHF 125W • Type-N connector..... **\$109.99**  
**IS-IE50LU-C0** 1.5-400MHz • HF 2kW, VHF 375W, UHF 125W • Type-N connector... **\$119.99**

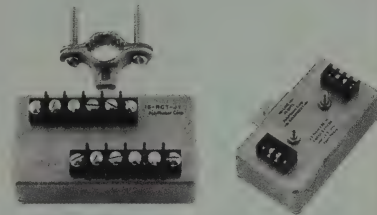
## LOW INDUCTANCE COPPER STRAP



A larger surface area and lower inductance gives strap a huge advantage over wire for RF grounding and lightning protection. Cannot be fused open by lightning. Usable above or in-ground, #26 AWG thickness. Available in 1.5" or 3" widths and 25', 50', 75' or 100' rolls. See Price Guide for details.

## GROUNDING PANEL

**CU-SPGP** A heavy 0.062" copper plate mounted on 1/2" plywood. For mounting protectors and establishing the important single grounding point for all station equipment. Comes with concrete anchors, mounting screws, two rolls of 10' x 1.5" copper grounding strap and 2 copper, 18" w x 12" h, sandwich bars, 16" on-center mount..... **\$69.99**

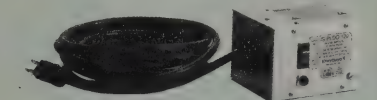


## ROTOR CONTROL PROTECTOR

**IS-RCT** (left) 8-wire protection for rotor control box and other nearby equipment. Water tight with mounting stud..... **\$54.99**

## IN-LINE PHONE LINE PROTECTOR

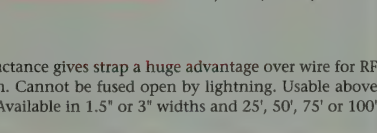
**IS-SPTL** (right) Multi-stage protection for telephone trunk lines. Handles ring voltages up to 105V, surges up to 36kA..... **\$57.99**



## POWER LINE EXTENSION PROTECTOR

In-line, multi-stage protectors provide multi-strike line protection, filtering and proper grounding for a 120V AC line. 2 grounded outlets, power switch, and circuit breaker. All aluminum grounded enclosure, 4.75" wide.

**IS-PLDO-120-15A** 15', 120V/15A ..... **\$159.99**  
**IS-PLDO-120-20A** 6' cord, 120V/20A. **\$199.99**



**GLEN MARTIN ENGINEERING**

**SP Certified**

Drop Shipped



## FULL BODY CLIMBING HARNESSES

**SkyClimber™** (left) Chest-high front D-ring for fixed climbing. Made of polyester, easy on/off. Two D-ring harnesses offer sliding D-ring at center of back, and chest-high front D-ring. Four D-ring harnesses have sliding D-ring at center of back, chest-high front D-ring, and D-ring on each hip.

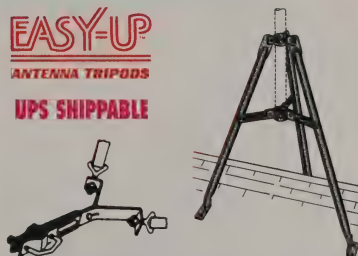
**FP-5600** Two D-ring, 2.7 lbs., S-M ..... **\$89.99**  
**FP-5601** Two D-ring, 2.8 lbs., L-XL ..... **89.99**  
**FP-5602** Four D-ring, 3.0 lbs., S-M ..... **106.99**  
**FP-5603** Four D-ring, 3.2 lbs., L-XL ..... **106.99**

**StarClimber™** (right) Six D-ring tower saddle harnesses with padded seat and shoulder straps, and removable tool belt. Sliding D-ring at center of back, chest-high front D-ring, D-ring on each hip and each end of seat strap, black 1.75" nylon tongue buckle leg strap, red 1.75" polyester shoulder straps, two accessory rings attached to 5" padded backpad and seatstrap, and carry-all bag.

**FP-6600** 5.0 lbs., extra small ..... **\$260.99**  
**FP-6601** 5.1 lbs., small ..... **236.99**  
**FP-6602** 5.2 lbs., medium ..... **236.99**  
**FP-6603** 5.3 lbs., large ..... **236.99**  
**FP-6604** 5.4 lbs., extra large ..... **236.99**

**EASY-UP**  
ANTENNA TRIPODS

UPS SHIPPABLE



The use of a self-supporting antenna mount makes a neat and attractive installation without guy wires. EZ-Ups are Heavy-Duty and Self-supporting - made out of 1-1/4 in. tubular steel with triple corrosion protection inside and out. Double embossed collars with six locking screws hold masts up to 1-3/4 in. Fast, one-person installation, the legs extend to any after spacing. Shipped completely assembled and includes a pitch pad kit and lag screws.

**EZ 48-3ABX** (right) 3 ft. high, 8.5 lbs..... **\$24.99**  
**EZ 48-5ABX** (right) 5 ft. high, 12 lbs..... **\$34.99**  
**EZ 5-16** 5' 16 ga. steel mast (Pick-up only) **\$7.99**  
**EZ 29-24S** Heavy-duty Double-strap Chimney Mount (left) Mount includes two "Y" type mounts and 24' of stainless steel strap ..... **\$17.99**

## ALPHA DELTA

**DELTA-C** Antenna Insulator Kit with Surge Protection A center and two end insulators. For dipoles and wire antenna using either coax or balanced feed line. Highest quality, made from a virtually unbreakable UV/RF resistant material, rated full legal power. Stainless steel hardware used in the center insulator, and all connections are hard soldered. A built-in replaceable Arc-Plug<sup>®</sup> provides surge protection..... **\$29.99**  
**DELTA-CIN** End Insulator only..... ea. **\$1.99**  
**SEP** Replacement Arc-Plug<sup>®</sup> cartridge..... **\$15.99**

**MEJ** MFJ ENTERPRISES, INC.



1925

**Controller** for Yaesu ATAS-Series Antennas A handy in-line switch that controls the motorized up/down tuning function of Yaesu screwdriver antennas by putting the DC control voltage on the center conductor of the coax. Works with most rigs except the Icom IC-706 series, which requires a special control cable. When the up/down switch is pressed, the 706 will transmit 10W CW while monitoring for lowest SWR. When switch is released, the 706 returns to previous mode and power (order model 192512) ea. **\$59.99**

**AES**

ANTENNA ACCESSORIES

137

• 1-800-321-3594 OH • 1-800-327-1917 FL • 1-800-634-6227 NV

Email Your Questions to info@aesham.com



**Full line of accessories in Price Guide, including:** Tower Motor Drives  
5 ft. to 20 ft. Antenna Masts • 20 ft. Chromolly Masts • Thrust Bearings • Mast  
Raising Fixtures • Rotating bases • Coax support arms • Limit Switch Packages

### MA SERIES CRANK-UP TUBULAR TOWERS

handle 10 sq. ft. antennas at 50mph winds

Model	Height max. min.	Sections	Weight (in lbs.)	Section OD top/bottom	Base	Price
MA-40	40' 21'6"	2	242	3"sq./4.5"	12"x12"x12"	\$849.99
MA-550	55' 22'1"	3	435	3"sq./6"	18"x18"x18"	\$1399.99
MA-550MDP*	55' 22'1"	3	620	3"sq./6"	3'x3'x5'	\$2729.99
MA-770	70' 22'10"	4	645	3"sq./8"	3'x3'x6'	\$2359.99
MA-770MDP*	70' 22'10"	4	880	3"sq./8"	3'x3'x5.5'	\$3729.99
MA-850	85' 23'6"	5	943	3"sq./10"	4'x4'x6'	\$3649.99
MA-850MDP*	85' 23'6"	5	1128	3"sq./10"	4'x4'x6'	\$5029.99

\*Complete with heavy-duty motor drive with positive pull down. \*\*Standard bases and eave mounts included (except MA-770, 770MDP and 850MDP).

### FREE STANDING CRANK-UP TOWERS

handle 18 sq. ft. antennas at 50mph winds

Model	Height max. min.	Sections	Weight (in lbs.)	Section OD top/bottom	Base	Price
TX-438	38' 21'6"	2	355	12.5"/15"	3'x3'x5'	\$979.99
TX-455	55' 21'6"	3	670	12.5"/18"	3'x3'x6'	\$1579.99
TX-472	72' 22'8"	4	1040	12.5"/21.625"	4'x4'x7'	\$2459.99
TX-472MDP*	72' 22'8"	4	1210	12.5"/21.625"	4'x4'x7'	\$3999.99
TX-489MDPL**	89' 23'4"	5	1800	12.5"/25.625"	4'x4'x8.167'	\$6429.99

\*Includes heavy-duty motor drive with positive pull down.

\*\*Comes with heavy-duty motor drive with dual level wind and positive pull down. Also includes fully operational limit switch package.

### FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

handle 30 sq. ft. antennas at 50mph winds\*\*

Model	Height max. min.	Sections	Weight (in lbs.)	Section OD top/bottom	Base	Price
HDX-538	38' 21'6"	2	600	15"/18"	3'x3'x6'	\$1269.99
HDX-555	55' 22'	3	870	15"/21.625"	4'x4'x6'	\$2269.99
HDX-572MDPL*	72' 22'8"	4	1600	15"/25.625"	4'x4'x8.167'	\$5899.99
HDX-589MDPL*	89' 23'8"	5	2440	15"/30.625"	5'x5'x8.5'	\$7699.99
HDX-689MDPL*	89' 23'8"	5	3450	18"/37.125"	5'x5'x9.5'	\$14999.99
HDX-5106MDPL*	106' 24'8"	6	3700	15"/37.125"	5'x5'x9.5'	\$15999.99

\*Includes heavy-duty motor drive with dual level wind and positive pull down and fully operational limit switch package.

\*\*HDX-689MDPL rated 60 sq. ft. and HDX-5106MDPL rated 35 sq. ft.

### FREE STANDING "LOW-PROFILE" COMPACT CRANK-UP TOWERS

SS models handle 18 sq. ft. antennas, HD handles 24 sq. ft., at 50mph winds

Model	Height max. min.	Sections	Weight (in lbs.)	Section OD top/bottom	Base	Price
TMM-433SS*	33' 11'4"	4	315	10"/18"	3'x3'x4'	\$1139.99
TMM-433HD	33' 11'4"	4	400	12.5"/20.875"	3'x3'x5'	\$1379.99
TMM-541SS	41' 12'	5	430	10"/20.875"	3'x3'x4.5'	\$1499.99

\*Includes heavy-duty motor drive with dual level wind and positive pull down and fully operational limit switch package.

\*\*HDX-689MDPL rated 60 sq. ft. and HDX-5106MDPL rated 35 sq. ft.





# UNIVERSAL TOWERS

**ALUMINUM, FREESTANDING, SELF-SUPPORTING AT RATED LOAD**

Universal offers 10-foot easy-to-assemble sections or complete towers ranging from 30 to 100 feet with a choice of wind load ratings and accessories. The lightweight, rust-free, strong, aluminum sections are equilateral, triangular, welded trusses available in 11, 14, 18, 22, 26 or 30-inch widths. To choose the proper tower: a) Determine the projected surface area of the mountable antenna. This figure is often found in the accompanying antenna literature. If not, use the following standards: standard TV antennas = 2 sq. ft. in area; 6/10 meter beams and large TV antennas = 5 sq. ft.; 20/40 meter beams = 9 sq. ft.; large 20/40 meter beams or multiple antenna arrays = 18-26 sq. ft. [when using a rotator, add 1 sq. ft., plus 1 sq. ft. for the mast, to the antenna size] b) Decide on the desired tower height. [sectional towers provide the option to add height later] c) Choose a model based on height and windload. Model numbers are merely wind load followed by height. [eg. Model 5-50 = 5 sq. ft. wind load + 50' desired height]

# hy-gain ROTATORS

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## The HAM-IV

is the most popular rotator in the world! It is designed for medium communications arrays of up to 15 sq. ft. wind load area. Low temperature grease permits normal operation down to -30° F. New alloy ring gear gives extra strength up to 100,000 PSI for maximum reliability. The indicator potentiometer leads have ferrite beads to reduce RF susceptibility. For convenience a Cinch® plug connector is used at the rotor plus an 8-pin plug at the control box. Dual 98 ball bearing race for load bearing strength and electric locking steel wedge brake prevents wind induced antenna movement. North or South center meter scale. Maximum mast size: 2.063 in. .... **\$529.99**

### Ham-IV Specifications

Wind Load cap.(inside tower)	15 square feet
Wind Load (w/mast adapter)	7.5 square feet
Turning Power (in lbs.)	800
Brake Power (in lbs.)	5000
Brake Construction	Electric Wedge
Ball Bearing Assembly	Dual race/96 bearings
Mounting Hardware	Clamp plate/steel U-bolts
Control Cable Conductors	8 (Belden 8448 or 9405)
Shipping Weight (lbs.)	24
Effective Moment (in tower)	2800 ft/lbs.

## The TAILTWISTER SERIES II

is designed for medium communications antenna arrays of up to 20 sq. ft. wind load area. Available with DCU-1 Pathfinder Digital control box (T-2XD) or standard Analog control box (T-2X). Low temperature grease, alloy ring gear, indicator potentiometer, ferrite beads on potentiometer wires, weatherproof AMP connectors plus 8-pin plug at the control box. Triple bearing race with 138 ball bearings for large load bearing strength, electric locking steel wedge brake, North or South center meter scale, low voltage control. Maximum mast size: 2.063 in. **T-2X** with analog control..... **\$619.99**  
**T-2XD** with DCU-1 control ..... **\$979.99**

### TAILTWISTER Specifications

Wind Load cap.(inside tower)	20 square feet
Wind Load (w/mast adapter)	10 square feet
Turning Power (in lbs.)	1000
Brake Power (in lbs.)	9000
Brake Construction	Electric Wedge
Ball Bearing Assembly	Triple race/138 bearings
Mounting Hardware	Clamp plate/steel U-bolts
Control Cable Conductors	8 (Belden 8448 or 9405)
Shipping Weight (lbs.)	28
Effective Moment (in tower)	3400 ft/lbs.



## THE HAM-V

Designed for medium communications antenna arrays of up to 15 sq. ft. wind load area. Includes the innovative DCU-1 Pathfinder control unit. A strong 100,000 p.s.i alloy ring gear and a new indicator potentiometer have been added for improved reliability. For convenience, a Cinch® connector is used at the rotor and an 8-pin plug at the control box. Ferrite beads reduce RFI. Powder coated finish. Max. mast size: 2.063 in..... **\$899.99**

### HAM-V Specifications

Wind Load cap.(inside tower)	15 square feet
Wind Load (w/mast adapter)	7.5 square feet
Turning Power (in lbs.)	800
Brake Power (in lbs.)	5000
Brake Construction	Electric Wedge
Ball Bearing Assembly	Dual race/96 bearings
Mounting Hardware	Clamp plate/steel U-bolts
Control Cable Conductors	8 (Belden 8448 or 9405)
Shipping Weight (lbs.)	24
Effective Moment (in tower)	2800 foot/lbs.



## The HDR-300A

is the best for king-sized antenna arrays up to 25 sq. ft. wind load. Machined steel output gear. Tough, hardened stainless steel output shaft with a long keyway for added reliability. North or South centered calibration. Ferrite beads are installed on the potentiometer wires to reduce RF susceptibility. Heavy-duty self-centering steel mast clamp and hardware. Digital heading display accurate to 1°. Mast size: 1.25"-3" .. **\$1229.99**

### HDR-300A Specifications

Wind Load capacity	25 square feet
Wind Load (w/mast adapter)	N/A
Turning Power (inch lbs.)	5000
Brake Power (inch lbs.)	7500
Brake Construction	Solenoid operated locking
Bearing Assembly	Bronze sleeve w/rollers
Mounting Hardware	Stainless steel bolts
Control Cable Conductors	7 (Belden 8448 or 9405)
Shipping Weight (lbs.)	55
Effective Moment (in tower)	5000 ft/lbs.



## The AR-40

is for large FM-TV and compact communication antenna arrays up to 3.0 sq. ft. wind load area. The dual 12 ball bearing race is exclusive in its class. Automatic position sensor never needs resetting. Fully automatic control, just dial and touch for any desired location. Solid state, low voltage control. Safe and silent operation. Maximum mast size: 2.063 in. Includes light duty lower mast support..... **\$269.99**

### AR-40 Specifications

Wind Load cap.(inside tower)	3.0 square feet
Wind Load (w/mast adapter)	1.5 square feet
Turning Power (inch lbs.)	350
Brake Power (inch lbs.)	450
Brake Construction	Disc Brake
Ball Bearing Assembly	Dual race/12 bearings
Mounting Hardware	Plated clamps/steel bolts
Control Cable Conductors	5 (Belden 8448 or 9405)
Shipping Weight (lbs.)	14
Effective Moment (in tower)	300 ft/lbs.



## The CD-45-II

handles 8.5 sq. ft. mounted inside a tower, or 5 sq. ft. with mast adapter. Low temperature grease good to -30°F. Bell rotator design gives total weather protection, dual 58 ball bearing race gives proven support. Die-cast ring gear, stamped steel gear drive, heavy duty, trouble free gear train, North or South center scale, lighted directional indicator, 8-pin plug on control unit, snap-action control switches, low voltage control, safe operation, takes masts up to 2.063". Includes light duty lower mast support..... **\$369.99**

### CD-45-II Specifications

Wind Load cap.(inside tower)	8.5 square feet
Wind Load (w/mast adapter)	5.0 square feet
Turning Power (inch lbs.)	600
Brake Power (inch lbs.)	800
Brake Construction	Disc Brake
Ball Bearing Assembly	Dual race/48 bearings
Mounting Hardware	plated clamps/steel U-bolts
Control Cable Conductors	8 (Belden 8448 or 9405)
Shipping Weight (lbs.)	22
Effective Moment (in tower)	1200 ft/lbs.



## The DCU-1 PATHFINDER

Digital Rotator Control unit compatible with CD-45-II, HAM-IV, T-2X

Automatic operation of brake and rotor with digital readout out of your beam heading, accurate to 1°, and 360° choice for center of rotation. Automatic 8-second brake engagement delay reduces stopping torque stress. Six presets store favorite headings. RS-232 computer control, compatible with many logging and contest programs. **\$599.99**

## Rotator Accessories

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**G-2800DXA (left)** The top-of-the-line rotator for extra heavy-duty applications. 450° total rotation, with presets • 34 sq. ft. wind load • K-factor of 6870 ft. lbs. • 1808 ft. lbs. of stationary torque • Rotation torque: 57.8-181 ft. lbs., rotation speed and torque vary with the speed control setting • Maximum vertical load of 661 lbs. • ±1/2° backlash • 1.875-2.5" mast size • 48-150 second 360° rotation • Optional GS-232A interface • Includes 131' (40m) of 6-wire cable • 8"dia. x 13.375" h • 13.2 lbs. .... **\$1139.99**

**G-1000DXA (right)** High-performance for medium and heavy-duty applications. Total rotational range 450°, with presets • 23 sq. ft. wind load • K-factor of 2020 ft. lbs. • 433 ft. lbs. of stationary torque • Rotation torque: 43-79 ft. lbs., rotation speed and torque vary with speed setting • Max. vertical load: 440 lbs. • ±2° backlash • 1.5-2.5" mast • 35-74 sec. 360° rotation • Optional GS-232A interface • Requires 6-wire cable • 7.5"dia. x 12.5" h • 7.7 lbs. .... **\$519.99**

**G-450A (left)** For HF/VHF light to medium-duty applications, without presets • 10 sq. ft. wind load • K-factor of 722 ft. lbs. • 217 ft. lbs. of stationary torque • Rotation torque: 43 ft. lbs. • Maximum vertical load of 220 lbs. • 1.5-2.5" mast size • 53 second 360° rotation • Requires 5-wire cable • 7.5"dia. x 12.5" h • 7 lbs. .... **\$259.99**

**G-5500 (right)** Azimuth-Elevation rotator combo for satellite earth station & other space communication antennas • 11 sq. ft. wind load • 578 ft. lbs. K-factor • 145 ft. lbs. stationary torque • Rotation torque: 44 ft. lbs. • 440 lbs. max. vertical load • ±4% backlash • 1.5-2.5" mast • 58 sec. 360° rotation • 67 sec. 180° elevation • Opt. GS-232A interface/C-1000 cable • 1.25-1.625" boom dia. • Requires 2 x 6-wire cable • 12.5"dia. x 7.5" h, 20 lbs. .... **\$629.99**

**G-550** Elevation rotator, for satellite earth station and other space communication antennas • 12 sq. ft. wind load • K-factor of 578 ft. lbs. • 101 ft. lbs. of stationary torque • Rotation torque: 73 ft. lbs. • Maximum vertical load of 440 lbs. • ±3% backlash • 1.5-2.5" mast size • 67 second 180° elevation • 1.25-1.625" boom diameter • Requires 6-wire cable • 10.5"dia. x 7.5" h • 7.3 lbs. ... **\$299.99**



**G-800DXA (left)** High-performance for medium-duty applications. Total rotational range 450°, with presets • 17 sq. ft. wind load • K-factor of 1299 ft. lbs. • 288 ft. lbs. of stationary torque • 43-79 ft. lbs. rotation torque, rotation speed/torque vary with the speed control setting • Max. vertical load of 440 lbs. • ±2° backlash • 1.5-2.5" mast • 35-74sec. 360° rotation • Optional GS-232A interface • Requires 5-wire cable • 7.5"dia. x 12.5" h • 7.5 lbs. ... **\$429.99**

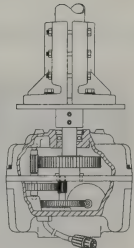
**G-800SA (right)** High performance for medium-duty applications. Total rotational range 450°, no presets • 17 sq. ft. wind load • K-factor of 1299 ft. lbs. • 288 ft. lbs. of stationary torque • 43-79 ft. lbs. rotation torque, rotation speed/torque vary with the speed control setting • Max. vertical load of 440 lbs. • ±2° backlash • 1.5-2.5" mast size • 44 second 360° rotation • Quick-disconnect plug • Requires 5-wire cable • 7.5"dia. x 12.5" h • 7.5 lbs. ... **\$339.99**

## ACCESSORIES

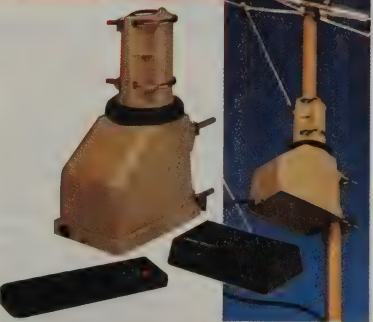
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## Channel Master

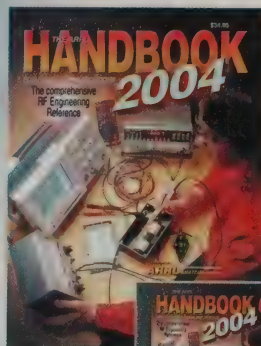


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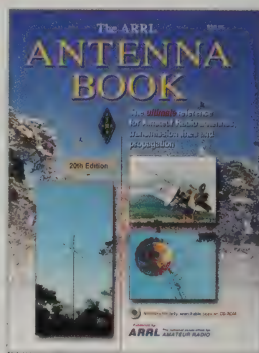
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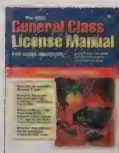


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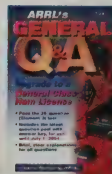
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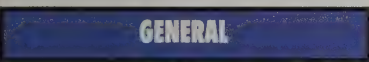
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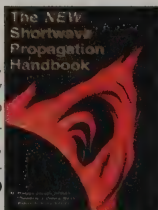
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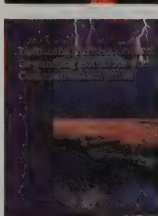
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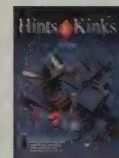


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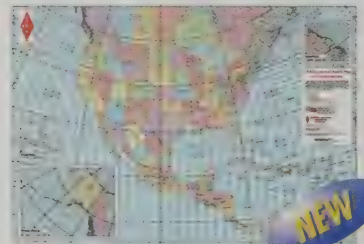
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An entertaining and informative first step in discovering the excitement of amateur radio. Perfect for educating kids. An illustrated story designed to provide the basic information about ham radio - its history, its applications, and its relevance in the world today ..... **ICO COMICBOOK1 \$4.95**

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Over 1.5 million listings by name, address, county, country and license class. Displays license issue date, expiration, previous call and class, area code, e-mail, URL, county, time zone, lat/longitude, grid square, beam heading and distance. • PC DOS and Windows (3.1, 95, 98) compatible • Extensive international listings • Label printing • 4,000+ photos and QSL cards • Interfaces with most logging programs • Calculates beam heading **BUC HAMCALL \$50.99**



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Click through 1,250,000 names, call signs and addresses of world-wide amateurs. Supports Windows, DOS, and most UNIX/Linux versions. • Latest FCC call signs (as of 04/15/2003) • Over 232,000 e-mail addresses • Includes country names for calls • 12,000+ digital QSL cards • Built-in text editor with formatting • 17-button multi-function toolbar • Auto storage of personal data • Automatic QSL card generator • User-customizable display • All-new multi-page printing • Multi-hit retrieval, returns 1000's of records .. **WAL HAM QRZ \$29.99**

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Types of satellites currently in orbit and how they operate. How to buy or build weather satellite receivers and antennas. How to build an interface to view images received from satellites or shortwave WEFAX on a PC, and more ..... **ARR 342 \$20**

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A compilation of QST articles dealing with satellites like Amsat-Oscars 10 and 13, Russian RS series and Microsats **ARR 277 \$15**



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If it Orbits the Globe Logsat Can Track it! Track hundreds of satellites in dozens of windows. **Features:** KANSAS CITY TRACKER support • Complete multi-tasking • Unlimited number of satellite windows can be opened at the same time • Voice alarms when satellite window becomes visible • 5 map projections, high or low resolution for 486DX2 and Pentium PC's or slower 386's • 3D antenna radiation diagrams can be displayed • On-line help • Includes The Satellite Encyclopedia. **Minimum Requirements:** Windows® 3.1/95/NT compatible • Mouse or compatible pointing device • Standard keyboard • 286 processor • 4MB RAM • 15MB hard disk space. **Optional:** PC compatible sound card with speakers • 486 with 32MB RAM • Kansas City Tracker rotor interface. **LOG LOGSAT PRO \$69.99**



## The ARRL DXCC List, May 2003 ed.

The official DXCC information source! Record the entities you've worked and QSLed. Includes a complete listing of DX Century Club rules. It contains information about each entity on the DXCC List, deleted entities, and the latest entity additions. Also included are a prefix cross-reference and the list of international call sign series. Descriptions of all awards are covered, and information about how to get numerous DXCC items. A "must have" for every DXer ..... **ARR 149 \$4**



## DXing on the Edge

The Thrill of 160 Meters, by Jeff Briggs, K1ZM. A fascinating chronicle of what it takes to navigate the 160M band. Includes useful operating tips and descriptions for many practical antennas. Includes a CD with truly exotic, exciting QSOs made from prominent DX stations. Many photos and historical data included, from the early 30s through present day. 224 pages... **ARR 150 \$29.95**

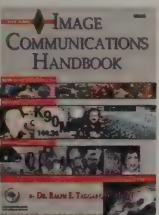




**ARRL's Low Power Communication**  
The Art and Science of QRP, by Richard Arland, K7SZ. The low power game is one of ham radio's most exciting and rewarding challenges. Here's the lowdown on low power operating, from selecting gear, to advanced operating techniques, antennas, emergency communications, solar power, and more! 208 pages..... **ARR 200 \$14.95**

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Concise computer reference for the novice and the pro. Contains hard to find information for IBM's and compatibles. Includes DOS commands, ASCII codes, numeric prefixes, video standards, decimal/hex conversions, error codes, memory/address/IO maps, modem commands and switch settings, scan codes, CPU types, DOS/Windows history, PC industry phonebook..... **SEQ POCKET PC REF \$14.99**



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Explore the possibilities of using amateur radio to see and talk with other hams! With home computers, widely available software, and gear many hams already own, it's easier than ever to enjoy imaging modes: narrow band television (NBTV), amateur television (ATV), slow-scan television (SSTV), and weather satellite imaging (WEFAX). 185 pp., plus CD ..... **ARR 190 \$25.95**

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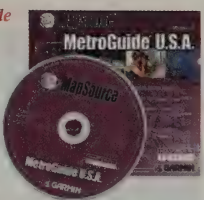


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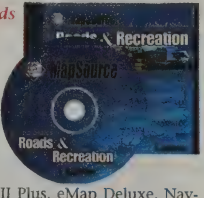


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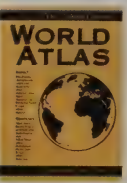
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More than 20,000 listings for voice and digital repeaters and propagation beacons located in the Americas. Lists more than 500 beacons from 14-24GHz, band plans, tone chart, committees, clubs. **ARR 272 \$9.95**



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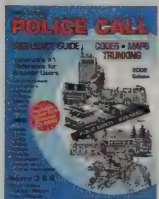
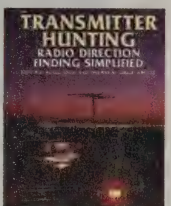
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**2003/04 TravelPlus for Repeaters™ v.0**  
Make TravelPlus your traveling companion, and you'll never be alone on the road. Locate ham radio repeaters along any US or Canadian travel route using this map-based software. Point and click. It's that easy! • Integrated maps and repeater data • Access the entire 2003/04 ARRL VHF/UHF Repeater Database and ARRL Repeater Directory text • Choose maps that display major highways and cities in the US and Canada, or more detailed maps, or use your own scanned maps • Trace a route on colorful maps and find all repeaters within a specific range • Customize repeater information • Supports real time GPS tracking • NEW! Works with other third party software • Requires Windows 98SE-XP ..... **ARR 323 \$39.95**

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Frequency guide and reference for scanner users. Packed with information to help get the most out of using a scanner. Covers Illinois, Indiana, Kentucky, Michigan, Ohio & Wisconsin or Arizona, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, The Dakotas, Utah, & Wyoming. 600 pp. and CD. **POL VOL3/42003 or VOLS/82003 \$19.99**

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See time for locations you create, or select from over 475 predefined cities. Illuminates areas currently experiencing daylight (sunrise/set), also highlights changing seasons. Global daylight savings time auto adjusts. Options to change colors and features. Requires Windows® 95 or later, 4MB memory (16MB recommended), 5MB free space ..... **GEO WORLDWATCH \$49.99**



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Big, durable, 11.25" x 13.75", spiralbound, book. Contains basic star map and glow-in-the-dark star finder, seasonal star charts, constellations and characteristics of stars..... **CEL 93722 \$19.99**







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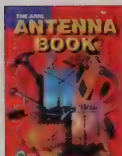
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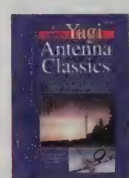


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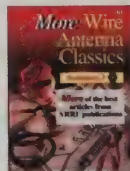
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A range of articles from QST and the Antenna Compendium series. Selected tips and techniques from QST's "Hints & Kinks". Includes theory, modeling, VHF, UHF, HF, directional arrays, reduced size, radials and ground, antenna product suppliers ..... ARR 329 **\$12**



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Wire antennas ranging from simple to complex. Find out to deliver the performance you want. Dipoles, broadband and multi-band dipoles, loops, collinear, rhombics, wire beams, vertically polarized and receive antennas are all featured, even a chapter on tree-mounted antennas... ARR 344 **\$14**

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Proudly display your favorite QSL cards in these 12" x 40" clear plastic hanging holders. Each holds 20 3.5" x 5.5" cards. Open at center to receive cards easily. Pack of three (displays 60 cards) ..... **\$18.99**



**Power Pocket** Portable power for emergencies, ham-fests, hiking, etc. The 12V @ 2A/hour sealed lead-acid rechargeable battery provides up to 6X longer talk time than standard packs. Recharges completely in 6-8 hours, with supplied charger. Partial discharges can be recharged to 100% without memory effect. Radio conveniently plugs into included female adapter socket. Compact carrying case with belt loop and shoulder strap. 3.5" w x 1" d x 6.5" h, 30 oz. .... **\$66.99**



### 72887 SUPERADIO III™

High Performance, Long Range AM/FM Portable Radio Long Range Reception: • Tuned RF stages on both AM and FM • 8" FM swivel whip antenna • 7.875" AM ferrite rod antenna. Station Selectivity and Separation: • Ceramic IF filter, plus 3 IF tuned circuits on FM • 4 IF tuned circuits on AM • Selectable normal or wide AM • Switchable AFC • Precision vernier tuning. Best Sound Quality: • 6.5" woofer, plus 2" tweeter • Separate bass and treble controls • Volume plus loudness circuitry to boost bass response at low volume levels. Other features: • Headphone jack • AM-FM external antenna terminals • Operates on AC power or 6 D-cells • Outstanding sound quality • Fold down carry handle • Rugged metal speaker grille • 12.75" w x 9" h x 3.25" d, 5 lbs ..... **\$49.99**



## POWERPORT



**HM-817 FT-817 Worldpouch** Designed specifically for the FT-817, the WorldPouch begs you to bring this extremely versatile radio and all of its accessories out into the field with ease. The rugged nylon fanny pack is designed for comfort and provides easy access to your radio through the zippered radio pouch. The fanny pack has two roomy accessory pockets, and there are multiple nylon loops and tie downs to secure your extra antennas, coax and any other necessities of the moment. The world pouch is well padded, has a built-in antenna pocket and a pocket for a battery (not included) for extended talk time in the field. One of the best features is that the radio pouch can also be removed from the fanny pack and will clip easily onto your belt for ultralight travel when desired ..... **\$73.99**

**HMP-II WorldPackII** Backpack Transport a rig easily and safely. Small enough to qualify as carry-on luggage, or fits comfortably on your back. Clever radio elevator to adjust radio height. Constructed of laminated black heavy-duty nylon with 1/4" foam padding. Other tie down points to secure gear.



Separate lower compartment for power supply or rechargeable battery with pass through holes for wiring. Comfortable body contoured mesh straps with webbing loops to attach handheld HT or GPS in sky view position. Two antenna pockets to secure multiple elements with tie downs and antenna sleeve to support them. Pocket in the lid to secure your microphone and act as a wind cover. 17" h x 8" w x 3" d ..... **\$67.99**

**WorldPack Rechargeable Power Kit** Designed to fit perfectly within the WorldPack. 8AH rechargeable gel cell power supply with labeled wire harness, female cigarette lighter plug, DC outlet and charger. Choice of two charger rates. Won't overcharge. Sold as an accessory to the WorldPack.

**HPP-8A** 2-stage, recharges overnight..... **\$73.99**  
**HP-8AF** Fast 2-stage charger will recharge from a full discharged state in 2.5 hours ..... **\$119.99**

**Radio Glove Pouches** designed specifically for your radios. Their sleek profiles, constructed of fine glove quality leather, offer maximum protection without adding bulk and size to your mini-handheld. We've thought of all the little details that you've been wishing for, from the sturdy leather covered belt clip, to a pocket to stash extra accessories.... **\$19.99**  
*All available models listed in the Price Guide under Cutting Edge.*



## COMMUNICATIONS OUTFITTERS

**EXP-1 Expedition Pack** Designed for the Yaesu FT-817. Allows backpack style or table top operation with complete access to all controls, front and rear. Zippered pouch on both sides securely holds most any antenna in the collapsed position for travel. Radio compartment is divided so the top section will hold the FT-817, and the lower compartment can be used for an amplifier, tuner or other radios. Made of high quality, durable nylon with plastic panels for rigidity. Water-resistant. 12" w x 4" h x 15" d..... **\$99.99**



## UNI-SOLAR



SmartCharge flexible solar panels for advanced solar battery charging. Sized to charge and maintain 12V batteries. Flexible and durable design makes them very convenient to use.

**USF-5 5W Solar Panel** Ideally, provides up to 24-hours a day and automatically compensates for battery self-discharge. For hams, boaters, RV owners and other battery users. Perfect for vehicles that stay idle for extended periods. • Lightweight • 10" x 20"  
 • For lower use applications • 0.54 lbs..... **\$89.99**

**USF-32 32W Solar Panel** Heavy duty, provides more than 12A-hours (ideally) a day. Meets demands for portable ham operations, lighting, radios, stereos, fish finders, etc. Use multiple units for more capacity. • 17" X 60" • 2.14 lbs. **\$269.99**



**P-212 2-Outlet Cigarette Plug Adapter** (left) Use two 12V accessories from 1 outlet ..... **\$4.99**

**P-212B Dual Cigarette Socket** (top right) Enables two 12 volt accessories to be used from one outlet, comes with replaceable 15 amp fuse ..... **\$8.99**

**P-12R 2-Contact Cigarette Plug** (bottom right) Solder type with strain relief and grip end... **\$1.99**

**P-12V Cigarette Plug** Cigarette lighter plug with leads..... **\$1.99**

**P-12X Cigarette Lighter Plug** Easy to use solderless plug. Crimp wire to terminals..... **\$1.69**

## MFJ MFJ ENTERPRISES, INC.



## CARRYING CASES

**18 HamGear™ Tactical Chest Harness** (left) Perfect for rugged use, emergency radio operators and on-the-go hams! Use it for portable hamfest use, DXpeditions, field day, biking, hiking, etc. Made of durable heavy duty twill burlap, this interwoven fabric is water resistant and will cushion blows and scrapes. Adjustable shoulder straps. Harness is firmly held in place by stretchable inter-woven elastic belt with snap hook and adjustable sliders supported by nylon straps. A 5 x 7 inch cargo pocket holds another radio, maps, etc..... **\$29.99**

**15 HamGear™ Belt Radio Holder** (right) Durable twill burlap pocket with elastic cord and velcro closure easily stretches over any HT. Belt slides easily through 2 x 3 inch loop..... **\$14.99**

## BATTERIES

**92AA01 Super Ni-MH "AA" batteries** – they have twice the power of standard NiCads. Rated at 1300 mAh, these NiMH 1.2 volt batteries greatly extend operating time and do not exhibit the capacity reducing memory effect of NiCads. Perfect for use with the 259B/269 SWR analyzer with its built-in battery charging circuit. The 631 or 632 charger is recommended..... **\$2.99**

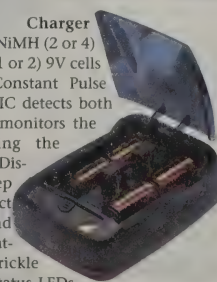
**92AA10 Super NiMH 10-pack**..... **\$24.99**

## CHARGERS

**631 PowerHaus™** Trickle battery charger Perfect for charging NiMH or NiCad rechargeable batteries used in the 259B/269 SWR Analyzer or other equipment. It has a removable dust cover and an AC 12 Volt, 800mA wall adapter is included. Reverse polarity protection and a bright red LED indicator that shows charging status. Does NOT charge alkaline batteries. Charges 2 to 4 NiMH or NiCad "AA" batteries in 14 hours..... **\$9.99**



**633 Intelligent Charger**  
 Charges NiCad and NiMH (2 or 4) AAA, AA, C, D and (1 or 2) 9V cells  
 • Ultra-fast, safe Constant Pulse Current charging • IC detects both +DV and -DV, and monitors the voltage level during the charging process • Discharge Mode deep conditions to correct memory effect, and can rescue dead batteries • Final trickle charge • Charging status LEDs  
 • 120 VAC or 12 VDC operation..... **\$24.99**



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# MAHA

## RECHARGEABLE NIMH BATTERIES

**4-AA-220BH** PowerEX AA NiMH Battery Now rated 1.2V @ 2200 mAh  
 • Can be recharged 500-1000 times • Memory free – charge at anytime • Excellent for power intensive devices like Digital Cameras, MP-3 Players, GPS systems, etc..... (pack of 4) **\$18.99**

**9V** 8.4V, 170 mAh (9V sized)..... ea. **\$8.99**



**MH-FNB-72** An ultra high capacity 1700mAh, 9.6V NiMH battery exclusively for the Yaesu FT-817. Includes the cable that enables recharging the pack in 3 hours using a MAHA MH-C777, MH-C777PLUS, or MH-C888 charger (all shown below)..... **\$59.99**

## CHARGERS

**MH-C401FS** Cool Charger

Microprocessor controlled. Charges AA/AAA NiMH/NiCads, while keeping them cool. Includes 4 1800mAh AA's. Over-charge prevention. 100-minute or 5-hour ultra-cool charging..... **Closeout \$39.99**

**MH-C401FS4AA2** Above, with 4 PowerEx 2200 mAh AA rechargeable NiMH's & car cord. **\$49.95**

**MH-C204F** Smart Rapid Charger/Conditioner Charges 2 or 4 AA/AAA NiCad/NiMH rechargeables in 2-3 hours. Rejuvenate and restore dead batteries. 110V operation or can be used on 12V supply and in a car with the optional kit..... **\$24.99**

**MH-C204F8AA22** Above, with 8 PowerEx 2200 mAh AA rechargeable NiMH's, car cord.... **\$49.95**

## VECTRONICS

Electronic Kits Each features a quality epoxy glass PC board with solder mask and screen-printed component key, manual and components. Choose from 40M receiver; crystal radio; 40M CW, AM radio and TV transmitters; 2M preamp; CW keyer; battery conditioner; FM broadcast SCA decoder; SSB audio filter; and tunable SSB/CW audio filter..... **See Price Guide**



## Palomar Engineers

### VLF CONVERTERS

Receives and converts 10kHz-500kHz (VLF) to tune the 4MHz range. 2 models tune this low range on either a general coverage receiver or Ham band transceiver. Uses 9V battery. 2" h x 4.25" w x 5" d.

**VLF-A** Use with Ham band transceiver..... **\$99.99**

**VLF-S** Use with general coverage receiver. **\$99.99**



**MH-C888** Universal Drop-In Rapid Charger/Conditioner Special FLEX negative pulse feature prevents crystallization of 4.8 to 12V NiMH/NiCad 2-way radio battery packs. Deep-conditioning feature allows 3 consecutive charge and discharges. Built-in switching AC power supply, for home, office and 12V portable use..... **\$59.99**

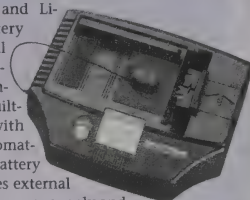


**MH-C777** Universal

Charger/Conditioner Charge nearly any type of 4.8V to 12V NiCad or NiMH battery pack. Conditioning

feature "exercises" batteries to improve capacity, and in some cases can rejuvenate a dead pack. 110 and 12V operation. Car kit is included..... **\$49.99**

**MH-C777 PLUS II** Smart Universal Charger and Analyzer/ Conditioner Charges most NiMH, NiCad, Li-Ion and Li-polymer battery packs for digital cameras, two-way radios, camcorders, etc. Built-in circuitry with LCD status automatically senses battery voltage. Includes external 110V switching power supply and 12V cord with cigarette lighter • Discharge-only feature retains discharged capacity of battery pack on screen • Enhanced Li-Ion charging algorithm reduces charging time..... **\$89.99**



## SUPERIOR ACCESSORIES

**18640** Universal Phone HT/GPS Holder (left) Keeps your phone, HT or GPS at your fingertips in your vehicle. Press the red button on side of cradle to open the rubber padded grips. Insert unit, squeeze grips and a ratcheting action adjusts to safely hold units 1.25 to 2.5" wide. Press the button again for quick release. 4.875" tall, attaches to a mount with screws provided..... **\$14.99**

**HOU CPM-310** (right) 6" pedestal for convenient mounting of small mobile radios. Bolts securely to vehicle floor board or any convenient area. Adjustable to multiple viewing angles..... **\$14.99**



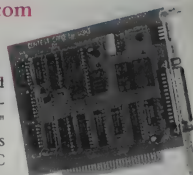
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## CONTEST CARD

**W9XT** Contest Card for IBM™ & PC Compatible A non-volatile 5" x 4.5" card that plugs into a single 8-bit PC slot and provides voice recording, playback and CW keying. Stores a total 60 seconds of voice audio divided into four 15 second messages. Samples at 8 kHz for high quality and natural sound. Does not use any disk space. For CW, the card frees up the PC port, and a relay allows operation with positive or negative keying. Works with all rigs and is compatible with most popular logging programs..... **\$139.99**

**CCC-8** Contest Card Cable Semi-kit Wired and tested except for connectors to mic and transmitter. Includes 6 ft. shielded cable, CW keying line and record switch (8-pin)..... **\$44.99**



# AOR

### TDF-370

Multi-Media Terminal with DSP Listen to amazingly clear audio, transmit and receive PSK31 and RTTY, apply potent filtering and hear "weak ones" others may miss. Digital modes without a PC! • Use powerful DSP noise reduction and filtering, including Fast Fourier Transform. Auto-notch function • Enhance audio reception of SSB and CW • Monitor SSB and CW in derived "stereo" • Decode and display PSK31 or RTTY, on the LCD • Enhance transmitted audio with 8 channels of mic equalization • Digital voice recorder • 2 selectable front panel inputs • Six outputs: phone, stereo headphones (included) internal or external speaker, mic, PTT and COM • Requires 4 AA's, NiCads or NiMHs or regulated external 9-15 VDC • 3.3" h x 4.3" w x 6.2" d, 12.3 oz..... **\$329.99**



NEW

### ARD-9800

Digital Voice & Image Interface Use conventional analog voice transceiver for digital voice communications,

data and images while maintaining analog capabilities. No modifications, simply connect between mic and jack. Operates with transceiver in SSB mode. Automatic voice signal detector recognizes received signal as analog or digital, automatically switching to appropriate mode. Uses Open Digital Protocol, use is permitted on US amateur bands. Send and receive SSTV images in digital mode. Built-in video output connector allows external TV monitor viewing. Operate high speed data on HF band at 3600bps. Operates on 10-16VDC @ 200mA. 3.94" w x 1.26" h x 6.14" d..... **\$549.99**





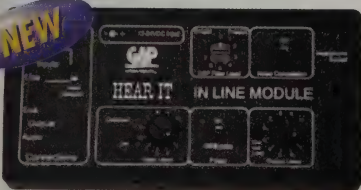
# GAP



**HEAR IT** Noise Eliminating Speaker Incorporates new DSP technology. Fully adaptive to any change in background or man-made noise levels and effectively attenuates it up to -20dB. This dramatic drop in noise level results in clearer and less fatiguing audio that jumps out of the speaker.

The 'Hear it' has the capability to reduce noise equal to, or better than, DSP systems built into several popular radios. If the radio already has DSP, the 'Hear it' will provide an additional benefit. If it doesn't have DSP, the 'Hear it' will make a remarkable improvement in signal readability.

Offers 8 user-selectable noise cancelling levels, or cancelling can be switched off entirely. Plugging headphones or another speaker into the audio bypass jack mutes the speaker, but retains DSP noise reduction. • 2.5W of audio power • Requires 12-28VDC @ 500mA • 6.5' lead with 3.5mm mono plug • 4.5" w x 2.75" h x 2.25" d ..... **\$159.99**



**IN LINE MODULE** Hear It In-Line Module Same audio enhancing features as the Hear It Speaker above. • 20dB average noise attenuation • 8 user-selectable noise attenuation levels • Input sensitivity control knob • 5W RMS audio input power • 2.5 W RMS, 8Ω audio output power • 3.5mm mono and RCA phono audio in/out jacks • Headphone jack • 12-24VDC, 500mA required • 3.5mm to 3.5mm audio and fused power leads supplied • 6.75" w x 3.325" h x 1.375" d, 1 lb ..... **\$199.99**



## AES

**PCL-1 Pro Communications Loud-Speaker** Ideal for amateur radios, scanners, shortwave, PCs, paging, or surround sound. • Uses European-

built, 4" throw, 8Ω, 20W-rated contoured driver • Frequency response is 300Hz-5000Hz, ±3dB, optimized for max. speech intelligibility • Full magnetic shielding permits operation next to PCs, monitors or any other sensitive electronic equipment • Rugged, water resistant enclosure allows indoor or outdoor use • Powder-coated, perforated, metal grille protects speaker from damage or abuse • Complete with adjustable, metal mounting bracket for easy fixed or mobile use • Fitted with standard 3.5mm "mini-plug" on a 5.5', strain relieved cord • 5" w x 4.3" h x 3.2" d, 1.7 lbs. .... **\$19.99**

## MFJ

MFJ ENTERPRISES, INC.

**SPEAKERS**

**281 ClearTone™** Communications Speaker Features a 3" Mylar cone speaker mounted in a well-designed baffle. Improves speech intelligibility in the 600-4000Hz range while reducing undesirable noise, static & hum. 3.75" x 3" x 2.25" ..... **\$12.99**

**382 Deluxe ClearTone™** 1W Amplified Speaker Excellent for QRPers, base station HTs or rigs requiring more volume. A quality 3" speaker provides powerful audio - barely audible to high. All metal cabinet, rubber feet and vinyl clad cover. Uses 9V battery (not included) or 110V AC with optional adapter. Connect-ing cable included. 3.5" h x 1.75" w x 4.5" d ..... **\$39.99**

### OTHER ACCESSORIES

**890 DX Beacon Monitor** Use as an aid to check band conditions worldwide in just three minutes. It requires no connection to a transceiver. The beacon monitor is a stand alone timing device using a microprocessor and built-in WWVB atomic clock to keep track of the beacon activation sequence. LED indicators positioned across a world map show which of the 18 beacons is active at any given time. Storing the beacon frequencies in transceiver memory allows quick switching as one listens for beacon transmissions. When a beacon is heard on any of the frequencies, that band is open to the location indicated by the corresponding LED. • Requires 12VDC or 110VAC with the optional MFJ-1312D • 6.75" w x 5.25" h x 3" d ..... **\$99.99**



**OAK ON AIR or BLACK ON AIR** Illuminated Station Sign When actuated, the nearly 2" letters shine via six, noise free, replaceable, incandescent lamps. When not actuated, the letters are nearly invisible. Internal printed wiring board contains electronic "Smart Sense" circuit to remotely trigger the lamps on transmit by shorting or applying 10-14V to the circuit. Solid oak cabinet • Available in natural oak or black finish • Works with any radio • 13.8 VDC operation • AC wall cube power supply • RCA cord and diode adapter • Recessed rear connectors for flush wall mount ..... ea. **\$69.99**



**616 Speech Intelligibility Enhancer™** Provides approximately 20dB audio frequency boost or cut to four overlapping octave ranges centered at 300, 600, 1200 and 2400Hz. Improves ability to hear and understand SSB, FM, AM, CW QSOs by adjusting response levels to match hearing response for best clarity, then equalizing perceived loudness to each ear. Built-in dual, 2.5W, audio amps; front panel jack; speaker on/off switch; 2 selectable transceiver in-puts; bypass switch. Use with rig or PA system. 10" w x 2.5" h x 6" d, requires 12 VDC..... **\$159.99**



**624D Deluxe Hybrid Phone Patch Interfaces** a phone line with a rig for running phone patches. Jumper selectable for all Kenwood, Icom, Yaesu and Alinco transceivers using an 8-pin microphone connector. Adapts to work with virtually any rig. Uses 12VDC, 9V battery or 110VAC with AC adapter. 8" x 2" h x 6" ..... **\$119.99**



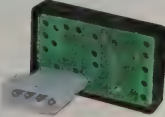
**762 Step Attenuator** Provides push-button selection of up to 81dB attenuation in 1dB steps • Excellent performance up to 170 MHz, usable to 500 MHz • 50Ω, 250 mW maximum input • BNC connectors with BNC-to-SO-239 adapters included • All metal cabinet, 6.5" w x 2.5" h x 1.5" d. **\$69.99**



### The BetterRF Company

**I-MATE** Accessory for ICOM PRO Series Provides external selection of pre-recorded voice and keyed messages for the 756PROII and keyed CW messages for the 746PRO. Eliminates shifting the display from operating mode to memory select mode to transmit pre-recorded messages. Four buttons transmit associated message. Provides pulsed sine-wave oscillator for safe tuner and amplifier tuning. Has alternate audio input for second mic. Plugs into transceiver mic jack. Receives power from the available voltage..... **\$74.99**

**706 TUNE CONT** Tune up Control for IC-706/ 718 Plugs into Molex connector on rear of radio. Converts radio's TUNER/ CALL button function to TUNE MODE which limits radio 8-10W RF output and produces a sidetone through the speaker. When finished, it reverts back to previous mode and power. No need to switch to AM or RTTY or hold down the PTT switch. Works 160-6M, except not 6M with original IC-706..... **\$32.99**







## RIRunner

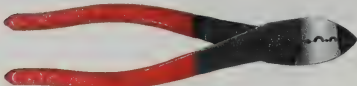
The most convenient and safest way to connect to a 12VDC source and distribute it to all equipment. A power panel that uses the excellent Anderson PowerPole® connectors. Perfect for shack or mobile. Eliminate those wall warts! • All models are conservatively rated at 40 amps total with any outlet good to 40 amps • Anderson PowerPole® crimp or solder connectors provide a safe secure, hot connect, polarized, color keyed, genderless connector system • Conforms to ARES/RACES, RSGB, ARRL recommendation for high current 12VDC connectors • No messy binding posts, frayed wire connections, black tape or short circuits • Each outlet is individually fused with automotive ATC/ATO fuses • Blown fuse LED shows status • Shipped with appropriate fuses installed.

**RR/4010S/C** 10 Outlets One "always on" outlet and 9 auto or manually controlled switched outlets. An FET On/Off system controls entire station with the power button on your rig. Quick status precision LED and audio voltage monitor..... **\$119.99**

**RR/4012/C** Intelligent DC Power Panel Neatly distributes 12V, up to 40A, from power supply or battery to transceivers and accessories. Perfect for home and mobile applications. 12V input connection fused at 40A and 12 pair of outlets supplied with assortment of standard automotive fuses. LED "open" indicators on every fuse. LED voltage monitor indicates normal voltage, LEDs and audio alert for over/undervoltage conditions. 6" DC cable and 24 Anderson Powerpole crimp-solder connectors. 11.8" w x 2.7" h x 1" d..... **\$112.99**

**RR/4008/C** 8 Outlets Quick status precision LED and audio alert voltage monitor. For small or mobile installations or as expansion unit. 5.75" w x 2.7" h x 1" d..... **\$92.99**

**RR/4005/C** 5 Outlets DC power panel, for small or mobile installations or as expansion unit 5.75" w x 2.7" h x 1" d..... **\$59.99**



**CR/TOOL** Crimper/Wire Cutter Handy for installing RIRunner connectors. Hardened steel, 8" for high leverage, comfortable plastic grip... **\$9.99**

**C30/PK/12** 24, 30A powerpole conns ..... **\$10.99**

# Look For This

**NEW**

## & Check Out AES' Latest Additions.

## WAHL ELECTRONICS ISO-TIP

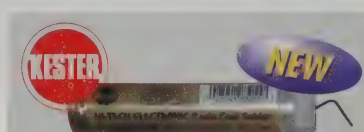
**7740** Cordless Soldering Iron Provides tip performance up to 50 watts and over 700°. Contains premium NiCad rechargeable battery for high-rate charging; a partially discharged unit will return to full capacity within 1 to 2 hours, with a complete recharge in 3 to 4.5 hours. Replaceable battery and worklight. Comes with recharging stand, fine and heavy tips ..... **\$47.99**



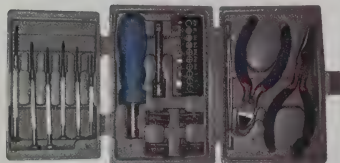
**7971** SolderPro 50 Usable as a soldering iron, torch, hot knife and heat tool using optional interchangeable tips • Heats up from 410°F to 750°F within 10 seconds • Runs up to 30 minutes • No electrical current • Easy refill, powered by standard cigarette lighter butane (not included)..... **\$19.99**



**7974** SolderPro 70 Usable as a portable soldering iron, torch, hot knife and heat tool using optional interchangeable tips • Heats up from 410°F to 850°F within 10 seconds • Runs up to 120 minutes • No electrical current • Easy refill, powered by standard lighter butane (not included) ..... **\$27.99**



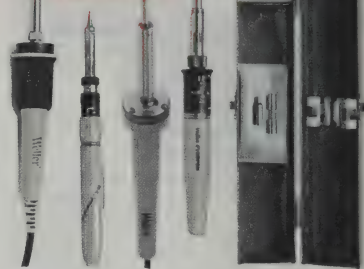
**82-5000-0004** Rosin Core Solder • 60% tin, 40% lead • 0.040" diameter • 374° F melting temperature • Non-corrosive • For all electrical applications • 0.5oz. in handy dispensing tube..... **\$1.99**



## VELLEMAN

**VTTs** Multi-Purpose Toolset A quality toolset for the electronic engineer and hobbyist • 4.75" universal handle, 3" extension, 9 different bits, hex adapter, and (4) 1/4" drive sockets • Bits: (Slotted) 1/8, 3/16, 1/4"; (Phillips) #1, #2, #3; (Star) T-15, T-20, T-25 • 4, 5, 6 and 8mm 1/4" drive sockets • 6 precision screwdrivers (4 slotted, 2 Phillips) • 4.5" mini diagonal plier • 5" mini long nose plier • Tweezers • Plastic carry box, 6" x 4" x 2".... **\$9.99**

## Weller



## SOLDER EQUIPMENT

**SP-23LK** 25W Soldering Iron Kit (middle right) Ideal for hobbies, kits, radios and delicate electronic work. "On" Indicator light. Supplied with three 750° tips, handy soldering tool and solder. Size: 8-1/4 in. long, 1-3/4 oz., Two-wire 6 ft. cord **\$17.99**

**W-60P** 60W Pencil-Type Soldering Iron (left) For most circuit work. Supplied with 0.0625" 700°F screwdriver tip. 7.5", 2.5 oz., 6' cord, 120V **\$64.99**

**WP-25** 25W Pencil-Type Soldering Iron For work on delicate electronics. 750°F tip temperature. 7.875" long, 1.75 oz., 4' cord, 120V AC.... **\$34.99**

**WSTA3** Pyropen® Butane Soldering Iron (right w/case) Light-weight and completely portable. Operates up to three hours on a charge of regular cigarette lighter butane (not included). Soldering temperature control is adjustable from 392° to 932°F, with a very fast heat-up time. It's ready to solder in just 30-seconds! Supplied with tips for soldering, hot air (1202°F), and brazing..... **\$99.99**

**WST2** Pyropen® Jr. (middle left) Portable, mini, butane-powered soldering iron. Recharges in seconds from a cigarette lighter butane (not included). Soldering temperature is adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch feature (2372°F). Has handy pocket clip..... **\$89.99**

**7200PK** Multi-purpose Soldering Gun Compact, lightweight, 75W for bigger work, connectors and almost any other heavier job. The flat, self-supporting back acts as a convenient rest when not in use. Carrying case, extra tip and solder. 120VAC. **\$28.99**



**WTCPT** 42W Temperature-Controlled Soldering Station (left) Ferro-magnetic sensor in tip controls temperature (700°F), no adjustments. Closed loop method protects components. ESD safe. Power unit, soldering iron and stand with sponge. 3-wire 4' cord. 4.5" x 5.94" x 3.63", 3.9 lbs..... **\$119.99**

**WESD51** 50W Adjustable Soldering Station Quick heat-up, rapid temperature recovery. Micro-processor-controlled, digital LED display shows setting and tip temperature (350°F to 850°F). Auto power off after 90 minutes of inactivity. ESD safe. Power unit, soldering iron with stand and sponge. 3-wire 4' cord. 5.9" x 4.5" x 3.6", 3.93 lbs **\$149.99**





**NCS-3230 Multi-RX Receive Console** The ultimate in RX audio control from up to 6 receivers! Connect radios, then choose which to monitor, where the audio will appear in the audio field (two modes), and record any or all audio utilizing manual or VOX activation. External recorder required. LEDs indicate which radio(s) are selected. • Built-in stereo amp • Front panel volume and balance controls • "Mute All" button • Use headphones/set or speakers or both • LEDs identify active radios • 12 VDC required • 8.5" w x 3.3" h x 6.6" d ..... **\$349.99**

**NCS-1514 Wall Power Supply** Designed for use with the 3230 above..... **\$24.99**

**NCS-P2PH35-A Cable Kit** 6 cables, 6' long, for connecting receivers, transceivers or scanners to the 3230. RCA phono connector (to 3230) on one end and 3.5mm phone plug on the other..... **\$42.99**

**NCS-MRX2MS-A Cable Interface Kit** For interfacing the 3230 to the 3240. Feeds selected audio from the 3230 to speakers or headphones/set connected to the 3240. Selective muting ..... **\$49.99**

**NCS-3240 Multi-Switcher A** "mini-console" that switches all equipment (mic, headset, keyer, foot-switch, etc) to any of four radios using LED-lighted push buttons. Switch between headset, desk/hand mic, TNC, phone patch, sound card, etc. Matches impedance, audio level and pin-out of nearly any mic to virtually any radio. Switches foot/hand-switch and CW keyer to selected radio. Switches radios receive to external speaker or headphones. Requires 12VDC. 8.5" w x 3.3" x 6.2" d ..... **\$299.99**

**NCS-1512 Wall Power Supply** For the 3240. 12 VDC output @ 300mA ..... **\$12.99**

**NCS-LOZNC Unterminated Cable** Requires mic connector installation. Other end is an 8-pin DIN male connector to interface with 3240..... **\$17.99**

**NCS-3400 Multi-Patch Passive Audio Panel** Organizes audio and other signal distribution in a shack. Makes it easy to add or reconfigure equipment. Consists of 5 rows by 10 columns of 3 types of connectors. Each row has 6 RCA phono jacks, 2 3.5mm phone jacks, and 2 standard phone jacks. 6 modular jacks for telephones and phone accessories. Slide switch disconnects 3.5mm and 6.4mm jacks from the 6 RCA jacks allowing each row segment to operate independently. 11.75" w x 4.75" h x 2" d (including mounting flanges) ..... **\$129.99**

See NCS in the Price Guide for Radio Interface Cables for Icom, Kenwood & Yaesu radios.

**BOUNTY HUNTER METAL DETECTORS**

**METAL DETECTORS**

**LAND STAR** boasts more features than other costly detectors. Includes a Bounty D-Tech™ open-face search coil, advanced microprocessor electronics, 3-tone discrimination and Ground Trac® retune. A multi-function LCD and touchpad control make it equally at home relic hunting, coin shooting, or gold prospecting. Set the notch to reject items, or let "Auto Notch" detect coins 12" deep..... **\$299.99**

**FAST TRACKER**

Newcomers to treasure hunting should not be shortchanged when it comes to features – or quality. That's why there's the Fast Tracker™. It offers 7" Bounty D-Tech™ search coil (adjustable angle), dual-tone audio discrimination, motion all-metals mode, auto ground balance, low-battery alert, built-in speaker, headphone jack, and lightweight S-rod comfort-grip handle with stand ..... **\$99.99**

**SHARP SHOOT II**

Treasures missed by generations won't escape the Sharp Shooter II™. Digital LCD, touchpad control, and interchangeable Bounty D-Tech™ search coil. Also features 3-tone audio discrimination, selectable auto/manual notch level, auto ground balance, battery indicator, S-rod comfort-grip handle with stand, headphone jack, and built-in speaker ..... **\$249.99**

**TRACKER IV** The optimum combination of power, ease-of-use, affordability, and big finds – every time: the Tracker IV™. Built with a fully-submersible 8" Bounty D-Tech™ search coil, sensitivity meter, built-in speaker, headphone jack and battery indicator. Tracker IV features 3 different user-adjustable operating modes: Motion All-Metals Mode, Full Discrimination, and Tone Discrimination ..... **\$129.99**

**LAND RANGER** Offers high-end features for the serious detectorist. Designed for every metal detecting application at a pro level. Touchpads keep all modes at quick and easy access while the LCD emits a constant reference source maximizing every possibility for finding treasure. It features an 8" waterproof, interchangeable search coil and SmartTrac® ground control ..... **\$399.99**

**QUICK DRAW II** The Bounty Hunter Quick Draw II™ metal detector packs powerful features, like an advanced Zilog Z-86 circuit, for superior discrimination and control. Also includes waterproof Bounty D-Tech™ search coil, 3 levels of iron discrimination, both target ID and depth readout, sensitivity control, full discrimination, auto and variable notch, and low battery indicator. Detects up to 10" deep – larger objects up to 5' ..... **\$199.99**

**TIME RANGER** Recover more relics and valuables from the past than ever before. The Time Ranger's powerful circuitry and smooth operation combine to deliver absolute performance. The innovative Sniff-Mode can be used in specialized applications when rejection/acceptance of a particular object is desired ..... **\$499.99**

**BOUNTY HUNTER ACCESSORIES**

**CARRY BAG** Padded Carrying Case Protects metal detectors from the elements, in storage and transit. Rugged, double-stitched, nylon construction. Includes outside zip-pocket ..... **\$29.99**

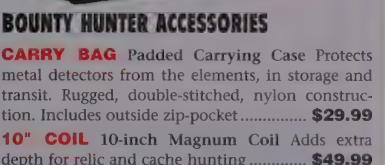
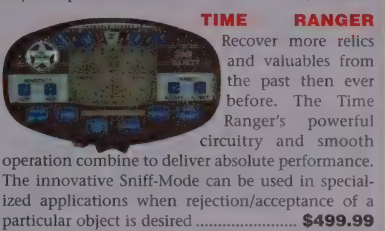
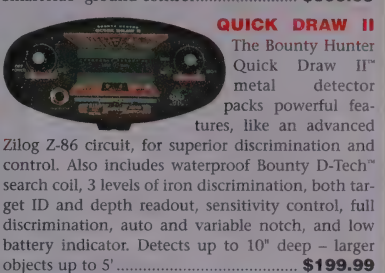
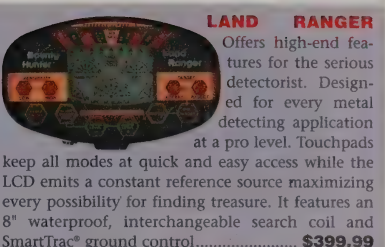
**10" COIL 10-inch Magnum Coil** Adds extra depth for relic and cache hunting ..... **\$49.99**

**IBOTZ INNOVATIVE ROBOT KITS**

Age 8 and up. Fun and educational! By assembling the kits, children and young adults learn some fundamentals of robotics and electronics. Assembly requires cutting and long-nose pliers, small hammer and screwdriver, and one 9V and 2 AA batteries.

**MR-1001 SoundTracker** A lively robot with audio sound sensor that causes it to react and alter direction of movement. 5" l x 3.75" h x 5.5" w .... **\$29.99**

**MR-1002 Antoid** Antoid has six legs that make him quite maneuverable. Uses infrared light source and sensor to alter direction. 6" l x 6" h x 7" w ..... **\$49.99**



**ICC NITELOGGER II Automatic Tape Recorder** Activator Takes audio output from a radio or scanner and provides an impedance match and voice activated relay operation for a tape recorder. When audio is present, the relay circuit, with adjustable drop out delay, automatically activates the recorder for the duration of the signal, then releases. Simple connection with supplied cables to radio's external jack, and tape recorder remote and mic inputs. AC adapter supplied. 4.37" w x 3.25" h x 2" d ..... **\$69.99**





**FTV-1000** 200W 50MHz Transverter for the FT-1000MP MK V Utilizes the same high-performance power MOS FET transistors as the MK V. PA stage operates at 30VDC, provided by the MK V power supply. Output devices, capable of 300W PEP, are run well below their maximum ratings for high reliability. The thermostatically-controlled cross-flow cooling fan keeps operation cool. Exclusive Class-A bias capability is now extended to the FTV-1000 50MHz operation providing the cleanest SSB signal on the band! It also features a high dynamic range receiver front end, utilizing a high-intercept design with JFETs in a double balanced mixer. Driving the mixer is a low-noise-figure MOS FET preamp, two gain selections available. For local, select IPO, bypassing preamp for direct feed to the mixer. 12dB attenuator available when working with extremely strong local signals. Rocker switches control all functions, with LED indicators..... **\$899.99**



**HRI-100** Amateur Radio Internet Linking Kit Uses DTMF signalling to connect HTs or Mobile transceivers to the Internet, greatly expanding the coverage area. A repeater-based system, ideal for emergency communications, "sister-city" link-ups, or accessing repeaters world-wide. Includes CD (including manual), power cable, RS-232C/DB-9 data cable, 8-pin mini-DIN plug data cable, 2 sound card in/out cables and WIRES™ II user/server agreement..... **\$149.99**

More WIRES™ II wide-coverage internet repeater enhancement system information can be found at [www.vxstd.com/en/wiresinfo/en/](http://www.vxstd.com/en/wiresinfo/en/)



**VXR-7000VA** 50W 2M FM Desktop Repeater A long list of built in features, sets the standard for mid-power, continuous duty base station and repeater applications. Whether used as a base station, with its attractive housing and user-friendly controls, or as remote repeater in the most demanding environments, the VXR-7000VA will provide years of reliable service. • 136-150MHz • 16 channel synthesized • 10-50W output, adjustable (100% duty) • 12.5/25kHz bandwidth • Programmable 16 tones/codes • ANI/ENI I.D. display\* • CW transmitter I.D.\* • Time-out, hang and guard\* timers • BCL/O, BTLO • Selectable repeater or base transceiver mode • Selectable local or remote mode • 115/230 VAC, automatic DC supply back-up • 4.5" h x 12.8" w x 15.4" d, 22 lbs..... **\$1269.99**

\* Dealer programmed feature



## SIRENS & HORNS

**VS-2** Emergency Vehicle Siren Designed for the volunteer fireman, a quality-built wail-yelp alarm that delivers big sound performance (120dBa sound level at 4 ft.). Frequency range is 600 to 1200Hz. It is pre-wired with a 3-position switch (Yelp-Off-Wail). High efficiency waterproof horn speaker. Also includes 10 ft. cable, mounting bracket and hardware. 12VDC @ 1.5A, 2.7 lbs..... **\$89.99**



**VS-2LS** Siren-Light Combo A one-unit siren and yelp alarm, revolving halogen light and window mount. Fits all cars, slides on top of car window and plugs into cigarette lighter. The power plug contains an "on" LED and three position switch to select Yelp, Off or Wail modes. 12 VDC @ 5A. Specify AMBER, BLUE or RED light..... ea. **\$299.99**



**VS-3** Vehicle P/A and Airhorn w/Rebroadcast A big, powerful airhorn sound with 4 different sounds (no siren) calls attention to your vehicle. Delivers 120dBa level at 4 ft. Locking down the microphone with the supplied rubber band, you can monitor sound from a mobile rig, scanner, etc. via the speaker outside. Includes horn speaker, microphone, electronic center, 10 ft. cable, mounting bracket and hardware. 12 VDC @ 1.5A..... **\$129.99**

**VS-4** P/A Emergency Vehicle Siren Contains P/A, rebroadcast, wail, yelp, pulse and airhorn. P/A override features, plus volume control of all siren modes. Restricts output when operating in people places. Includes horn speaker, microphone, electronic center (3 x 3.5 x 2 in.), 10 ft. cable, mounting bracket and hardware. 12V DC @ 1.5A.... **\$139.99**



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artsci



**REPEATER MAP Book** 11th Edition The perfect travel companion. Contains hundreds upon hundreds of open repeater locations throughout the U.S., Canada and Mexico. These detailed maps show all highways and major cities in each state. Grid squares on every U.S. map and NOAA weather frequencies for the U.S..... **\$14.99**



**SIRIUS**  
Satellite Radio

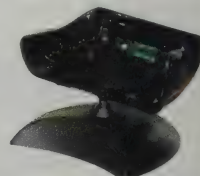


NEW



**KTC-H2A1** 100 Streams Of Satellite Radio Every minute of every day, SIRIUS beams programming to three state-of-the-art satellites moving high above the earth in figure eight, geo-synchronous orbits. The programming is then broadcast back down to every inch of the continental U.S. to your radio wherever you go with no signal fades. • 60 streams 100% commercial-free music • 40 streams of sports, news, and entertainment from CNBC, ESPN, NPR, Radio Disney, E! Entertainment, Discovery Channel and more • Over a half million songs streamed into your sound system every month (pop, rock, country, hip-hop, R&B, dance, jazz/standards, classical) • Live, in-studio performances and interviews • Stream jockey musicians, genre experts, and music fanatics who are knowledgeable about the musicians and songs they play • Plug & Play - for car or home with optional docking stations • Subscription required • 5" w x 3.5" h x 4.5" d, 14 oz..... **\$99.99**

**KPA-H2H** Home Docking Kit Home antenna, power supply, remote control, RCA cable. **\$69.99**



**KPA-H2C** Docking Kit for Car Magnet mount antenna, cigarette and cassette adapters..... **\$69.99**

**KCA-FM** Wireless FM Modulator Required if Car, Boat, or RV stereo does not have a cassette deck or auxiliary input..... **\$39.99**

1-888-539-SIRUS or [www.sirius.com](http://www.sirius.com) for more info.



**HSC-99** HamHub™ Station Controller Integrated interface to connect and control mic, headset, footswitch, TNC, rotor, transceiver and computer. • Provides isolation of critical audio circuits and opto-isolation of RS-232 and control in/outputs • Both sound card and TNC in/outputs are transformer isolated to eliminate ground-loops • Uses single USB connection (computer) and provides 3 opto-isolated RS-232 serial COM ports for TNC, rotor and rig control (serial output configurable to match some older TTL rigs) • Full-time audio multi-level indicators on both in/output circuits match audio levels between equipment • Internal high-speed micro-controller implements and supervises functions making them transparent to the user • Soft/hardware controls interlock - choose which overrides the other • Operates with most soundcard and software control programs..... **\$349.99**



## FORERUNNR 201

GPS/Personal Training Device Designed for athletes as well as the recreational walker or runner. It offers an easy-to-read display, adjustable wristband and an integrated GPS sensor to calculate speed, distance and pace. The Virtual Partner™ feature lets you input time, distance and pace goals, and then shows if you're ahead or lagging. With the GPS navigation capabilities, mark specific locations, look up and navigate to these points, retrace steps or reverse a normal route for variety in routine. Garmin provides performance-tracking software to analyze athletic activity over time. Software will be available as a free download from Garmin's web site. Data can be transferred to a PC, for plotting and analyzing performance in order to make changes in training regimen. Includes wristband, A/C charger with PC interface, manual, and quick start guide. 3.3" w x 1.7" h x 0.6" d, 2.75 oz ..... **\$149.99**



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**T-5950-2/AA** 22 Channel GMRS/FRS Rugged Motorola quality with clear communications whether skiing or hiking rough terrain. Built to withstand harsh environments and provide extra communications range (up to five miles) depending on terrain and conditions. • 1W maximum transmit power • 7 GMRS/FRS 1W channels • 7 FRS 0.5W channels • 8 GMRS 1W channels • 8 NOAA weather channels • 99 codes, 10 audible call tones • Hands-free VOX • Multiple scanning functions • VibraCall® alert • Keypad lock • Backlit display • Removable swivel belt clip..... pair **\$79.99**



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**T-4500-2** 22 Channel GMRS/ FRS Offers the ultimate in small size GMRS radios, compares to the smallest cell phones or pagers. Weather resistant design. Up to 2-mile range • 500mW maximum transmit power • 7 GMRS/FRS channels • 7 FRS channels • 8 GMRS channels • Scanning • Audible call tone talk confirmation tone • Audible low battery alert • Uses AAA alkalines..... pair **\$29.99**



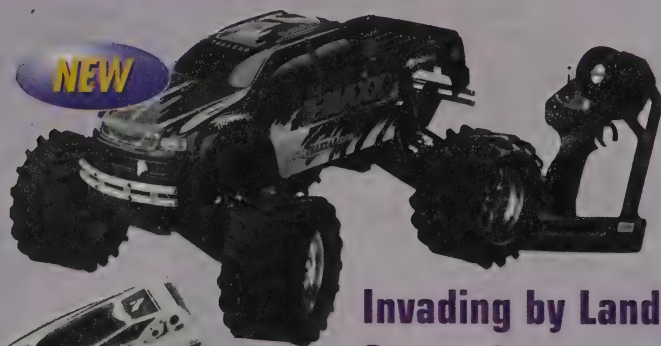
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**LW-2000** (left) 3 AA alkaline batteries (included) power 4 LEDs. 7.75" long, 1.25" diameter ..... **\$29.99**

**LW-3000** Similar to LW4000, but smaller. 3 C alkalines power 7 LEDs 8.75" long, 1.625" dia... **\$49.99**

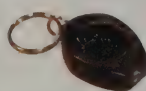


**LW-4000** (right pic & end view at left) 3 D alkalines power 10 LEDs. 10.75" long, 2" diameter . **\$59.99**

**LW-HT** Illuminator™ Head Torch 1"-wide adjustable strapping secures light to the head. Up/down adjustable. 4 high-intensity LEDs powered by 3 AA batteries (not included) provide super-bright light visible for over one mile, over 330 hours ..... **\$39.99**



**LW-PB** PocketBright™ Flashlight Includes key ring, neck lanyard and velcro patches. Single, high-intensity LED, powered by 2 included Lithium batteries, provides over 50 hours of light that can be seen across a full-sized room. .... **\$19.99**



## UHF CONNECTORS

General purpose and, with the use of optional reducing adapters, accommodate a wide range of applications. Rated for up to 300 MHz. Impedance is non-constant and voltage rating is 500V peak.



### AMPHENOL

**83-1SP-1050** (PL-259) Male coax plug

**83-1SP** (PL-259) Silver-plated coax plug



### VAN GORDEN

**SILVER PLATED** (PL-259) Teflon



### AMPHENOL

**83-878** UHF single hole bulkhead receptacle



### AMPHENOL

**83-1R** (SO-239) UHF panel receptacle

**83-1H** (UG-106) Hood for 83-1R for inline use



### AMPHENOL PL-259 REDUCING ADAPTERS

**83-185** For RG-58  
**83-168** For RG-59/8X

## TYPE N CONNECTORS

Constant 50Ω impedance, excellent performance up to 11 GHz and 1,500V peak. Internal gaskets provide better weather resistance than the standard UHF type.

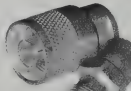


### AMPHENOL

**82-61** Male for RG-8  
**82-202-1006** Male for 8214/9913/9913F  
**34025** Male for RG-58

### AIM

**26-8027** Male for RG-8X



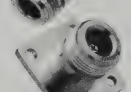
### VAN GORDEN

**N CONNECTOR** Male EZ-install type for 9913/8214



### AMPHENOL

**82-209** Female in-line for RG-8



### AMPHENOL

**82-24** Type-N panel receptacle

### AIM

**26-8011** Type-N chassis mount

## BNC CONNECTORS

Miniature, lightweight connectors for RG-58/59 type coax. Quick disconnect bayonet coupling, small size and low cost. Rated for up to 4 GHz. Impedance is 50Ω nominal. Voltage rating is 500V peak.



### AMPHENOL

**31-002** Male for RG-58  
**31-012** Male for RG-59/8X



### AIM

**27-8450** 4-screw chassis mount, screws not included



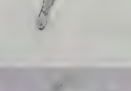
### AMPHENOL

**82-8470** Dual chassis mount



### AMPHENOL

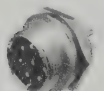
**27-8460** 3/8" hole chassis mount



### AMPHENOL

**31-221** Female chassis socket

## MICROPHONE AND DIN CONNECTORS



### VANCO

**CBC-8P** Panel mount 8-pin male



### KENWOOD

**7-PIN DIN** plug  
**8-PIN DIN** plug  
**13-PIN DIN** plug



### PHILMORE

**61-6088** 8-pin female mic plug



### VANCO

**CBC-4** 4-pin female mic plug  
**CBC-5** 5-pin female mic plug  
**CBC-6** 6-pin female mic plug



### HOUSE OF DEALS

**AP-115** 1/4" metal stereo plug



### HOUSE OF DEALS

**AP-135** 3.5mm stereo mini phone



### DALBANI

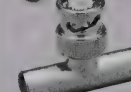
**15-0293** 3.5mm mono plug

## COAXIAL ADAPTERS



### AMPHENOL

**83-1T** UHF T-connector adapter (M-358)



### AIM

**27-8140** BNC T (2 fem., 1 male)



### AMPHENOL

**83-877** UHF double male adapter



### AMPHENOL

**4400** SO-239 to Type-N male



### AIM

**26-8015** Type-N male to SO-239



### AMPHENOL

**31-28** BNC female to PL-259



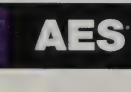
### AIM

**27-8120** BNC female to PL-259



### HOUSE OF DEALS

**SMA-872** SO-239 to SMA adapter



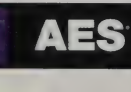
### AIM

**27-8130** BNC double male



### AMPHENOL

**2900** SO-239 to BNC male adapter



### AIM

**25-7420** BNC male to SO-239  
**26-8017** BNC male to N female



### AMPHENOL

**83-1AP** UHF right angle (UG-146)



### AMPHENOL

**82-64** Type-N right angle adapter



### AIM

**26-8016** BNC female to N male



### AMPHENOL

**25-7365** BNC female to SO-239



### AMPHENOL

**29-4140** SO-239 to mini PL-259



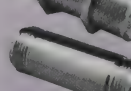
### AMPHENOL

**83-1J** UHF double female (PL-258)



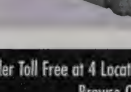
### AMPHENOL

**29-3855** BNC female to SMA male



### AMPHENOL

**25-7351** Chassis mt SO-239 double female



### AMPHENOL

**26-8010** Type-N double female

Prices for all items on this page can be found under CONNECTORS in the Price Guide.



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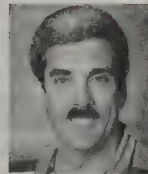
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**DAMAGED ITEMS** If you discover a damaged shipment, **THE CARRIER SHOULD BE NOTIFIED IMMEDIATELY.** The merchandise should not be returned to us until notified to do so by the carrier. All packaging materials must be retained including styrofoam peanuts, inner and outer cartons, labeling, etc. for inspection by the carrier or the claim may be denied. With shipments properly packaged (as all our shipments are), the ultimate responsibility for delivery in good condition rests with the carrier.

**DEFECTIVE ITEMS** Defective items should be returned to AES or the manufacturer for warranty repair or replacement, at our discretion. After processing, we will return it via ground method, at our expense in the 48 contiguous states. If you receive defective equipment, call our Customer Service Department at 414-358-4087 for instructions. Canadians please see "**Canadians Note:**" under TRADE-INS.

**INTERNET ORDERS** The customer may order products directly on our web site via our internet order form. If the customer does not have access to the web, but has an e-mail account, the customer may e-mail his/her order making sure the following information is included: full name, call sign (not required to order), phone number, billing address, shipping address, item(s) to be purchased (model number and manufacturer) and method of payment. If paying by credit card, we need the card number and expiration date.

**PAYMENT** Accepted forms of payment are electronic bank transfer, certified check, personal check, money order, credit card (VISA, MasterCard, Discover, American Express, IMPAC), or COD. The customer's choices of payment methods may depend on amount of purchase or destination of shipment.

**PRICING** We will pass on decreases in pricing to our customers whenever possible. Due to foreign currency fluctuations, promotions, manufacturers' specials, etc.; prices may vary, so be sure to confirm prices when ordering. All prices and specifications are subject to change without notice. **AMATEUR ELECTRONIC SUPPLY®** is not responsible for typographical errors or omissions.

**REFUNDS** Amounts under \$5.00 are not refunded unless requested in writing to the Milwaukee headquarters within 12 months.

**RETURNS** In order to maintain the lowest possible prices, we do not offer a *free trial or evaluation period* on new equipment. If permitted, an **Authorized** return of merchandise for credit (it must be like new with all original packaging) will be subject to a **Minimum 15% Restocking Fee.** The item must be returned within **10 days** after receipt, prepaid, with a copy of the purchase invoice and a letter describing the reason for the return. No returns on antennas, towers, cable, items drop-shipped from the manufacturer, audio or video tapes, kits, books, or computer software. Canadians please see "**Canadians Note:**" under TRADE-INS.

**PACKING FOR SERVICE AND/OR RETURN** When returning heavy, delicate, and expensive equipment, it must be carefully packed in order to avoid damage caused by normal transportation dynamics. When contents of packages are damaged, claims will be paid only if the carton and packing meet standards set in the International Safe Transit Association Procedure 1 and 1-A. These standards simply state that cartons and packing should provide reasonable protection to their contents. Ideally, contents should be suspended in the center of the carton by the packing material, no less than three inches on all sides for heavy items. For items heavier than 20 lbs., 3" of foam or crumpled paper should be used instead of polystyrene edge protectors.

When you send your well-packed parcel to AES, be sure to include a letter inside the package stating your call, name, address, e-mail address, phone and reason for return. Do not rely on information written or taped on the outside of the carton.

**SHIPPING** Shipping charges, which include adequate insurance, are

based on the Order Total at the time of the initial shipment (COD fees not included). The order amount on which charges are determined is pre-coupon and pre-tax (see chart on this page for rates). Cancellations on partially shipped orders will not affect the shipping charges. All back-orders from partially shipped orders are shipped PREPAID at the expense of AES® via Ground Service, only.

Shipping calculations on Ground method to the contiguous 48 states have been simplified by utilizing flat-rate categories (see chart on this page for rates). Other expedited methods and any USPS methods are charged at regular rates without any credit for ground rates. CODs are not accepted for these faster methods.

Shipments to APO/FPO are via Priority Mail. Orders exceeding ground method weight, size or value limits will be shipped via Truck or Air Freight collect. Shipping charges taxable in WI, FL & NV.

To insure orders arrive quickly, AES stocks items at all four locations. Occasionally, an item will be temporarily unavailable at certain branches, due to various reasons. In this case, AES will ship the order from a location that has the needed item.

### FLAT RATE SHIPPING via Ground in the contiguous 48 States

AMOUNT OF ORDER	SHIPPING CHARGES
Up to \$100.00 .....	\$4.99
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**TRADE-INS** Amateur Electronic Supply® accepts trade-ins on new equipment purchases, the worth of which is determined by the electrical and physical condition of the item. Estimates are given assuming the trade-in is in good electrical and physical condition. If it is not, a deduction will be made.

To facilitate a trade-in, the customer can choose one of the following: (A) Purchase the new item(s), send in the trade for evaluation, and have the trade-in amount refunded or credited. (B) Send in the trade and have the order held until the trade-in amount is determined.

When shipping trade-ins for evaluation, use a sturdy carton (double boxing is recommended) and plenty of packing material. Ship PREPAID & FULLY INSURED. Do not use Bus or Parcel Post. Collect shipments will not be accepted.

AES® assumes no responsibility for damage in transit or for filing of damage claims. Canadians, inquire locally about taxes and/or customs charges before releasing your shipment.

**Canadians Note:** Returned equipment not originally manufactured in the U.S. will be subject to valuation and custom charges, plus broker's fees. Check customs before shipping anything to us, including new equipment for warranty repair. We will not accept any shipments from outside of the U.S. unless all fees are paid in advance.

**BIDS & PURCHASE ORDERS** AES® accepts written and signed Purchase Orders from well rated D&B companies, military, schools, colleges, universities and federal, state, county and city Government agencies.

We welcome the chance to bid on your requirements and search the Internet daily for requests from all Government agencies. We are registered with FACNET and accept Government I.M.P.A.C.® charge cards. Net terms available to Government agencies, schools, and companies highly rated in Dunn & Bradstreet.

For more information, please contact Paul Szczerbinski, W9KHO (pauls@aesham.com) at AES® Milwaukee. Toll Free: 1-800-558-0411, Local: 414-358-0333 or Fax: 414-358-3337

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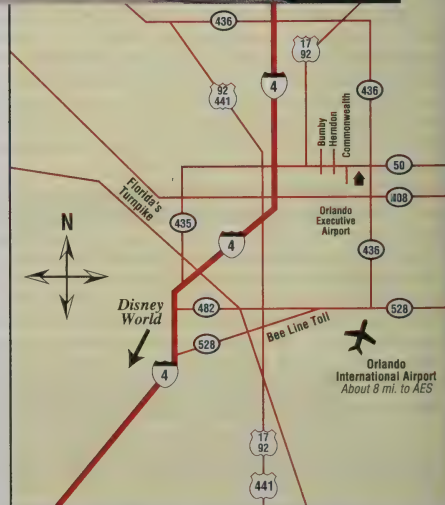
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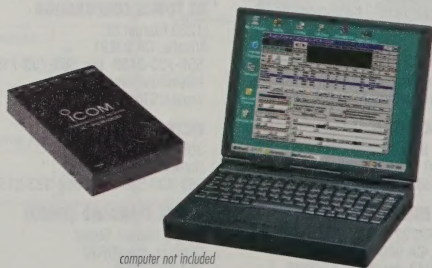
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## IC-706MKIIG

HF/VHF/UHF ALL MODE TRANSCEIVER



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